E
AC44884

COUNTY BOROUGH OF ST. HELENS.

Annual Report

ON THE

Health and Sanitary Circumstances of the Borough

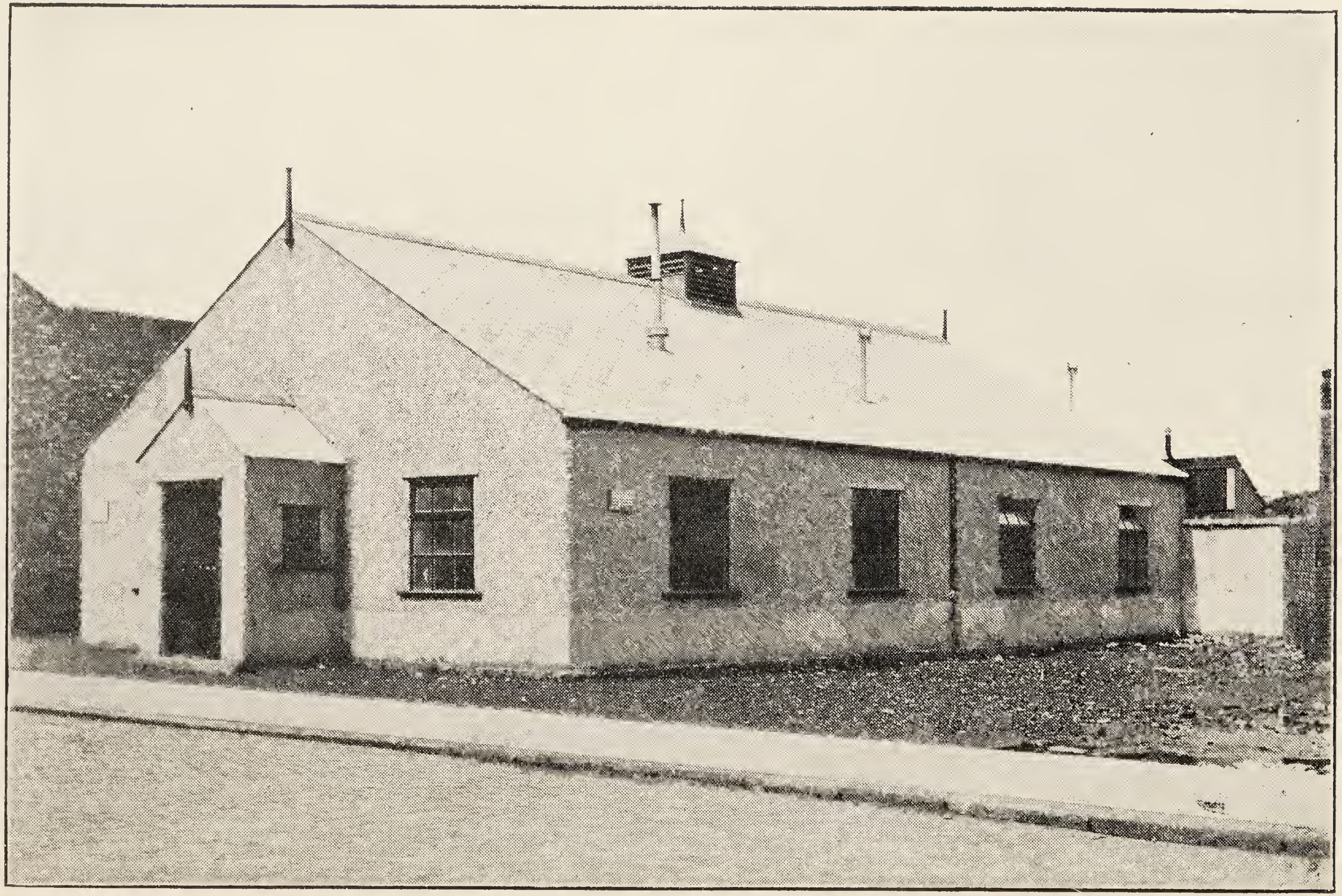
FOR THE YEAR 1920,

—BY—

JOSEPH CATES,
M.D., Lond., D.P.H., Camb.
Medical Officer of Health,
School Medical Officer.

St. Helens:
Westworth & Sons, Printers and Stationers, Lowe Street.

1921.



ALBION STREET MATERNITY CENTRE.

COUNTY BOROUGH OF ST. HELENS.

48TH

Annual Report

OF THE

Medical Officer of Health.

—BY—

JOSEPH CATES, M.D., State Medicine, B.S., (Lond). D.P.H. (Camb).

Medical Officer of Health, Chief Tuberculosis Officer, School Medical Officer, and Medical Superintendent of the Corporation Hospitals, County Borough of St. Helens; Fellow of the Royal Society of Medicine and Member of the Epidemiological Section, Fellow of the Society of Medical Officers of Health, and of the Royal Sanitary Institute, Formerly Demonstrator of Public Health at King's College, University of London, Assistant Medical Officer of Health to the County Borough of Coventry, Medical Officer of Health and School Medical Officer to the Borough and Port of Lancaster.

1920.

St. Helens:
Westworth & Sons, Printers and Stationers, Lowe Street.

1921.

Digitized by the Internet Archive
in 2018 with funding from
Wellcome Library

https://archive.org/details/b30127452

PREFACE.

TO THE CHAIRMAN AND MEMBERS
OF THE HEALTH COMMITTEE.

LADIES AND GENTLEMEN,

I have the honour to present the following report which deals with the health and sanitary circumstances of the borough for the year ending 31st December, 1920, and briefly reviews the work carried out under the direction of your medical officer.

POPULATION.

It is estimated that the population of the borough for the year 1920 was 104,822. The census return may be slightly less than the estimate.

MORTALITY.

The general death rate for St. Helens was 13.5 per 1,000 of the population. This is the lowest death rate ever recorded in the borough. In Central ward, an insanitary area, the death rate was 19.6.

The infant death rate was 113.3 per 1,000 births. Only once, in 1916, has the rate been less, but in Central ward the infant death rate was 170.6.

INFECTIOUS DISEASES.

The numbers of notifications of scarlet fever and diphtheria continued to decline. No instance of typhoid fever was reported.

Small pox did not occur.

The death rate from the seven principal infectious diseases was 1.2 per 1,000 of the population.

MATERNITY AND CHILD WELFARE.

The steps taken by the Council to promote the welfare of expectant mothers and young children by advice, nourishment and medical aid, are obtaining a large measure of success. In 1913 the infant death rate was 155 ; it is now 113..3, a reduction of 27 per cent. in seven years. These figures give reason to expect that resolute perseverance along the lines indicated in the next paragraph will accomplish an equally satisfactory result.

NEEDS OF THE DISTRICT.

The chief menace to life is the deficient and defective housing in the borough. While 20 to 30 per cent of the dwellings are overcrowded, and new houses are unavailable, little advance can be expected in the sanitary progress of St. Helens.

There are six directions in which action must be taken if the health of the district is to be improved :—

The provision of houses for the working class and the closing and clearance of certain insanitary areas.

The provision of adequate hospital accommodation for maternity and for infectious diseases.

The conversion of the pail closets and privies now in use.

The abolition of the bricked ashplaces and the provision of closed ashbins.

The paving of yards.

The provision of a refuse destructor.

SPECIAL REPORTS.

The attention of the Council is called to the results of three special investigations printed as appendices to this report. For several years there have been recurring complaints respecting the pollution of the canal at Gerards Bridge and of the Hardshaw Brook. A careful detailed enquiry was made by Mr. Jackson, one of the sanitary inspectors of the department, and the facts revealed are worthy of earnest consideration.

ECONOMY.

When a movement to reduce public expenditure began it was thought that health administration would be the first position to be attacked, and the experience of the last few months has served to show that this service is again in danger of its efficiency being impaired. The reasons for the attempt to cripple the public health service are not far to seek. It has many enemies. Interests vested in disease and in insanitation have been injured by the success of public health measures. The closing of an unfit house, the abatement of a nuisance, the seizure of unsound food, the abolition of cesspits, the institution of legal proceedings against the purveyor of watered milk are necessary actions, but unlikely to rouse the goodwill of the person against whom the proceedings are directed.

A public health department is not a trading concern that can each year contribute directly to the relief of rates, nevertheless it can show, to those who wish to understand, benefit to the community in improved health and prolongation of life.

St. Helens has for many years been a pioneer in measures of sanitary reform. When other towns have been reluctant, the Council of this borough has often stepped forward in the search for healthier conditions. It has been ready to accept civic responsibilities which other towns in their discretion have refused. This readiness to advance has naturally increased the expenditure of the town in health administration but there is now evidence that the policy of progress has been sound and that the outlay has been a good investment.

In 1900 few would have believed that in twenty years the infant death rate of the borough would be reduced 60 per cent and the general death rate would show nearly the same reduction. The saving in life and the money equivalent is shown in the diagram in table 55.

It is incredible that so progressive a municipality will lightly cast aside the fruits of its labour.

It gives me pleasure to refer to the manner in which the work of the department has been performed. The efficient conduct of a staff is dependent upon the willing and loyal service of its members. My thanks are due to Drs. Hauxwell, Turner and Saunders for considerable assistance in the compilation of this report, which is the eighth and the last that I shall have the privilege of presenting to the Health Committee.

I am,
Ladies and Gentlemen,
Your obedient servant,
JOSEPH CATES.

30*th March,* 1921

SUMMARY OF VITAL STATISTICS FOR 1920.

	St. Helens	England and Wales.
TOTAL POPULATION—Estimated to the middle of the year—	104,822	
MARRIAGES	882	379,658
Annual rate of persons married per 1,000 of the population	16.8	20.1
BIRTHS	3,334	957,994
Annual rate of births per 1,000 of the population	31.8	25.4
DEATHS	1,419	466,213
Annual rate of mortality per 1,000 of the population	13.5	12.4
Infant mortality rate per 1,000 births	113.3	80
Death-rate from diarrhœa of children under two years of age, per 1,000 births ...	10.7	8.3

ANNUAL REPORT

ON THE HEALTH AND SANITARY CIRCUMSTANCES OF THE BOROUGH DURING THE YEAR, 1920.

NATURAL AND SOCIAL CONDITIONS OF THE DISTRICT.

St. Helens is situated in the south west of Lancashire, about 10 miles north east of Liverpool and 20 miles west of Manchester. The coast is nearest at Seaforth, a town at the mouth of the Mersey, 12 miles west of the borough.

The line of the borough boundary is roughly the circumference of a circle, the centre being at Peasley Cross, and the radius a distance of about two miles.

The area is approximately 7,285 acres ; the assessable value on the 1st April, 1920, was £388,508. A penny borough rate is estimated to yield £1,500.

On the north east are the urban districts of Haydock and Ashton-in-Makerfield, and the rural district of Warrington. With these exceptions, the borough is bounded by the Whiston rural area.

From the south west corner of the borough, about 270 feet above sea level, the ground slopes gradually towards a belt of flat land extending from east to west across the district, and traversed by small streams which unite in the eastern part of the area to form the Sankey Brook. One of these water courses, known as Windle brook, passes through the centre of the thickly populated, north-western division of the borough. It appears that the older portions of the town were built along the banks of this stream. The land in the northern part of the borough also inclines towards the Windle brook.

Between St. Helens and the coast, the land generally is low lying, and is used for agriculture.

The borough is divided into nine wards. Table 1 on page 47 shows the position, acreage, estimated population for 1920, and density of each ward calculated on the approximate area built upon.

METEOROLOGY. At the Corporation Observatory in Victoria Park, meteorological readings are taken once a day at 9 a.m.

Table 2 shows the annual rainfall in St. Helens since 1890.

POPULATION. The estimated population of the borough at the middle of 1920 was 104, 822.

Table 3 gives the population for each census period, and in table 4 are shown the population of the various wards.

The age and sex distribution of the population at the time of the last census is set out in table 5.

Table 6 gives the number of persons resident in the various institutions of the borough at the census period 1911, and also the figures for 1920.

POOR LAW RELIEF. The amount of outdoor relief in money and kind supplied by the Guardians during the year ending 30th September, 1920, to persons resident within the borough, and chargeable to the Union was £12,298/8/2.

It has been found impossible to obtain figures showing the amount of pauperism in the borough for a series of years, as statistics are not prepared by the Poor Law Authority, for separate sanitary districts, but for the whole Union, which comprises nineteen townships.

CLOG AND CLOTHING FUND. A scheme to provide clothing for destitute children is organised by the Chief Constable. As a result of useful work carried out during the past year 516 children received footgear and clothing, 1,282 articles being distributed.

SCHOOL CANTEENS. Free meals to the number of 114,425 were provided by the Local Education Authority for children selected from a school population of 20,217. In addition there were 46,209 meals supplied on payment.

HOSPITALS. There are the following voluntary hospitals available for the use of the inhabitants of the borough, and those residing in the rural area around.

The Providence Free Hospital with accommodation for about 100 patients. There is no honorory visiting staff. Admission can only be obtained on the recommendation of the medical attendant of the patient. Each patient is under the care of his or her private medical practitioner or panel doctor, and is expected to pay the former for the treatment received. There is no resident medical officer, and no outpatient department. Maternity cases are not admitted, nor persons suffering from any infectious or contagious disease. There are four single bedded private wards. During 1920, 1,157 patients were admitted for treatment.

The St. Helens Hospital, formerly known as the Cottage Hospital, provides accommodation for about 115 patients. Admission is restricted to penny-a-week subscribers, their wives and children. There is no honorary visiting staff. Admission can only be obtained on the recommendation of the medical attendant of the patient ; each patient is treated by his own medical man. There is now a resident medical officer. Maternity cases are not admitted, nor are patients suffering from any infectious or contagious disease. In-patients other than insured persons, are expected to pay for medical or surgical treatment. An ophthalmic surgeon from Liverpool visits the institution once a week to examine patients sent to him with a recommendation from a private practitioner. A specialist in women's diseases attends once a fortnight to examine out-patients referred by private practitioners. During 1920, 1,380 new in-patients, 790 out-patients were treated.

The Pilkington Special Hospital, founded by Messrs. Pilkington Brothers, Ltd., was opened in February, 1917, and is an orthopædic and limb-fitting centre for a large area of Lancashire and the whole of Westmorland. It provides 300 beds, at present mostly occupied by discharged soldiers undergoing the special treatments. There are also nine side wards for cases after operation and for private cases, and a ward for women and children.

Upwards of 250 out-patients attend 5 days per week.

The medical staff consists of three resident medical officers and a visiting surgeon who is also the medical officer in charge.

The cases are chiefly orthopædic, viz. :—injuries to peripheral nerves ; contractural, paralytic and other deformities ; injuries and diseases of bones and joints ; amputation cases for limb fitting.

The departments of the hospital work are :—

SURGERY : (*a*) operative ; (*b*) minor.
RADIOGRAPHY.
PHYSIOTHERAPY : (*a*) electro-therapy, (*b*) hydro-therapy,
(*c*) thermo-therapy, (*d*) mechano-therapy,
(*e*) massage.
SPLINTS AND PLASTER CASTS.
ARTIFICIAL LIMBS : fitting and repairs.
EDUCATIONAL AND PERSONAL WORK : (*a*) curative workshops.
(*b*) studies.
(*c*) entertainments and sports.

Admission of discharged soldiers is arranged with the Ministry of Pensions.

The special facilities provided by the hospital for cases of industrial and other accidents are utilised by Messrs. Pilkington Brothers, Ltd., for their employees ; by local Colliery Companies ; by Accident Insurance Companies, and by the doctors of St. Helens and district.

Cases other than accidents if found suitable are admitted—on a capitation charge.

CRIPPLE CHILDREN.

A voluntary association for the aid of crippled children has rendered help during the year to 112 patients by the provision of apparatus, spinal carriages and hospital treatment.

The Education Authority contributed £1,531/15/4 towards the maintenance of children at surgical homes and other institutions.

CONVALESCENT HOMES.

A Fresh-Air Fund sent 37 children to convalescent homes for a period of at least three weeks, and assisted in other ways for a large number of cases.

HOME NURSING.

In order to provide for the home nursing of infectious diseases, particularly measles, whooping cough, ophthalmia and pneumonia, the council utilises the services of the nurses employed at the school clinic. During 1920, 743 persons were nursed at home, 7,055 visits being made. The services of the nurses have been greatly appreciated and considerable benefit would be likely to accrue from an extension of the scheme, to cover the home nursing of other ailments, especially pulmonary tuberculosis.

A nursing association, by means of voluntary contributions, maintains a superintendent and eight nurses to attend suitable cases in their own homes and those residing in outlying areas. One thousand, one hundred and sixty-five new cases and 118 old cases were nursed during the year, the total number of visits amounting to 27,296.

SCHOOL CLINIC AND DISPENSARY.

This centre has afforded treatment to 7,182 persons during 1920. The amount of work carried out at the clinic is increasing rapidly, and it is becoming an important factor in the prevention of illness, and in the discovery of the beginnings of disease.

SANITARY CIRCUMSTANCES OF THE DISTRICT.

WATER.

The Council supply water obtained from deep wells in the new red sandstone. There are six pumping stations. A portion of the water is pumped to a central reservoir, and before being distributed is sometimes softened by a liming process, the average hardness before and after softening being, according to Clark's scale 22.0 degrees and 10.4 degrees respectively. During the year ending 31st December, 1920, 1,693,157,994 gallons were used, 1,060,248,034 for domestic supply, and 632,909,960 for trade purposes. The vast majority of houses in the borough are supplied from the corporation mains. The supply is constant, but has recently proved insufficient. A few farms and cottages are still supplied from shallow wells.

RIVERS AND STREAMS.

The Sankey Brook formed by the Windle, Sutton and Rainford brooks, together with several small watercourses, passes through the north-eastern quarter of the borough, closely following the course of the St. Helens canal. It receives the effluent from the corporation sewage works, the Haydock sewage works, and also a large amount of untreated sewage and trade effluent. The canal at Gerards Bridge is greatly polluted with crude sewage.

DRAINAGE AND SEWERAGE.

Drains are laid in practically the whole of the populous portions of the borough but owing to colliery subsidences the condition of the main sewers gives cause for anxiety. There is separation of sewage and storm water in Dentons Green and Newtown areas, surface and storm water being turned into the Windle Brook. In the outlying districts a number of houses have been built in situations remote from the sewers. About three-quarters of the sewage of the borough passes through Parr sewage works and is treated from time to time by liming and sedimentation. The effluent, varying greatly in composition, is discharged into the Sankey Brook. The remainder of the sewage is turned, untreated, into the same watercourse. The bulk of the material collected from the conservancy system is taken to a depot in Parr. A portion of the substance obtained from privy middens is sold to farmers.

CLOSET ACCOMMODATION.

Tables 7 and 8 show the estimated number of houses with the various types of sanitary conveniences existant in the borough each year since 1907, and the number of conversions completed since 1904. During the war there was a considerable diminution in the number of conversions carried out. In June, 1919, the Council decided to begin again the work of the systematic abolition of the conservancy method. To meet the increased cost of labour the former grant of £1/7/6 for each pail closet converted was increased to £3/10/0. In addition it was resolved to provide a tippler wall bin free of cost to owners who wish to do away with a bricked ashplace. The usual fittings are given for each conversion completed in a satisfactory manner.

PUBLIC CONVENIENCES.

There are fifteen public conveniences situated in various parts of the town. Eleven are modern structures, but in only one instance is there water closet accommodation.

Additional provision is urgently needed, both as regards closets and also urinals for women.

PUBLIC BATHS.

The Public Baths are situated in Boundary Road. The total number of baths used during the year was 176,478, being 139,835 plunge baths, 36,526 slipper baths, and 117 vapour baths.

A PUBLIC WASH HOUSE.

There are still in the borough a considerable number of houses without a wash-boiler or other facility for domestic washing. Under ordinary circumstances there would be need for a public wash-house, but with the amount of overcrowding in St. Helens the provision of suitable central accommodation should no longer be delayed.

SCAVENGING.

Removal of house refuse, and the emptying of pail closets and privy middens are undertaken by the corporation.

The removal of the contents of privy middens is carried out about three times a year and at less infrequent intervals on request. Pail closets and ashplaces are supposed to be emptied about once a week. Fish refuse and other material liable readily to decompose are taken away weekly. Bricked ashpits and ashplaces with wooden doors are common in the borough. The conversion of these to wall bins of the tippler type is slowly being proceeded with, 570 were converted during the year. Sixty-nine moveable bins were provided. In new houses wall bins are generally fitted.

All of the house and trade dry refuse is now tipped at Parr. During 1920, 12,975 tons were destroyed at Boundary Road. The actual cost of labour per ton for destruction only was 3/11, and the approximate allowance for the sale of steam amounted to £932. The destructor at Boundary Road is now closed.

The general condition of the streets, passages and footpaths is unsatisfactory and in some areas of the town extremely insanitary.

Street sweeping is carried out by the corporation. The main streets are cleansed about twice a week. The side streets and passages about once a week. The cleansing and sweeping of footpaths adjoining dwellings is the duty of occupiers and is generally neglected.

SANITARY INSPECTION OF THE DISTRICT.

The total number of visits made by the five sanitary inspectors was 12,754. Table 9 contains a list of notices served during 1920 and a record of nuisances remedied.

All notices are examined and signed by the medical officer. Nuisances unremedied after a preliminary notice are reported to the health committee, and a statutory notice is then served. A long interval, it may be as much as three or four months, elapses before proceedings are instituted for failure to comply with the statutory notice. The knowledge that magisterial proceedings are rarely taken to enforce the removal of nuisances is the main cause of the failure of legal notices to achieve their purpose.

COMMON LODGING HOUSES.

There were in the borough at the beginning of the year four common lodging houses registered for the reception of 202 lodgers. During 55 inspections, 2 infringements of bye-laws were discovered.

HOUSES LET IN LODGINGS.

There were 15 houses let in lodgings on the register at the commencement of the year, but there are a large number of houses illegally used as houses let in lodgings.

The houses on the whole are not well kept, and are structurally unsuitable. Seventy inspections were made, and six notices were served.

BAKEHOUSES.

There are 100 bakehouses on the register: one is underground. Mechanical power is used in 15 instances.

Nine defects were discoverd during the year, and after notice each was remedied.

There is room for considerable improvement both in the sanitation of the premises and in the standard of cleanliness observed.

CANAL BOAT.

No canal boat was inspected during the year.

OFFENSIVE TRADES.

At least nine offensive trades are carried on within the borough. There are five tripe dealers, a manure manufacturer, a fat melter, a bone boiler and a gut scraper. In many cases the premises are structurally unsuitable.

UNDERGROUND ROOMS.

No instance was discovered of the use of an underground room as a dwelling, but many are used for the preparation of food.

ATMOSPHERIC POLLUTION.

An enquiry was continued under the auspices of the Committee for the Investigation of Atmospheric Pollution. When the atmosphere of a district is polluted by the imperfect combustion of coal, an indication of the extent of the pollution can be obtained by collecting rainwater and estimating the amount of soot and tarry matter therein.

The results of the enquiry and figures relating to similar investigations in other towns set out in table 10. Briefly it is shown that approximately 14 cwts. of soot per acre was deposited during the year in the centre of the town.

FOOD.

MILK SUPPLY.

Twenty persons are registered as cow keepers. There are about 198 cows kept for dairy purposes within the district. The animals are inspected four times a year by a veterinary surgeon appointed by the committee. Seven defects in the cow sheds were reported during 1920. A higher standard of cleanliness might be observed both in the methods of milking and in the state of the sheds, and insufficient use is made of the means of ventilation provided.

During 1920 two milk-shop dealers were added to the register, none was removed, 124 remaining on the register at the end of the year.

Although the committee now insist that milk sold from shops shall be stored in special receptacles, yet there can be little doubt that the risk of contamination in certain cases is considerable. General dealers should not be permitted to sell milk.

SALE OF FOOD AND DRUGS ACTS.

Ten informal samples of milk were purchased. Two hundred and ninety formal samples were taken and 15 were adulterated or otherwise tampered with. Seven examinations were made to discover the presence of dirt and in four of the samples of milk cow dung was present in amount varying from 4 to 17 grains per gallon.

Table 12 shows the results of the analysis of milk samples and the magisterial proceedings are set out in table 56. The number and nature of samples taken during the year are given on table 13. The results of the proceedings are not calculated to deter persons from adulterating food.

MILK AND CREAM REGULATIONS, 1912—1917.

Two hundred and ninety-nine samples of milk were analysed during the year. In no instance was any preservative discovered. No sample of preserved cream was purchased for analysis. No instance of an infringement of the requirements as to labelling was detected.

No bacteriological examination has been made of milk sold within the borough, and no steps are taken to prevent the sale of tuberculous milk.

INSPECTION OF MEAT.

A municipal abattoir is in a central position and has in connection with it cold air stores. Four thousand four hundred and twenty-nine beasts, 1,157 calves, 2,577 sheep and 4,807 pigs were killed in the public slaughterhouse during the year. No utilisation is made of the offal or other waste products. Two private slaughterhouses still remain in the borough and are unsuitable and insanitary. The licensees keep a register of animals slaughtered and make a weekly return to the medical officer of health. Two thousand, five hundred and fifteen pigs were killed in the private slaughterhouses during the year.

An inspection of meat exposed for sale in shops is regularly carried out.

Table 11 shows the number of animals found on slaughter to be diseased and the approximate weights of meats condemned at the abattoir, and at the private slaughterhouse.

No definite epidemic of food poisoning occurred in the borough during 1920, but it is almost certain that the majority of the 44 deaths which occurred from diarrhœa and enteritis can be directly attributed to infected food.

WORK PLACES.

FACTORY INSPECTION.

The inspection of factories is in the hands of the factory inspector appointed by the Home Office. Any act, neglect or default which can be dealt with under the Public Health Acts is referred to the Local Authority. Table 14 gives a list of matters so referred during 1920. The necessary alterations were carried out.

WORKSHOPS.

The number of workshops registered is 191. These were visited on 252 occasions, and as a result the defects shown in table 15 were discovered and in due course remedied.

WORKPLACES.

Twelve workplaces are registered, the trades carried on being in one instance that of a plumber, in one a joiner, in three a wheelwright, in three a smith, in two a mason. Two cabyards are registered.

Several of the workshops and workplaces were closed temporarily owing to the war.

OUTWORKERS.

Occupiers of factories, workshops or any place from which work of certain kinds is given out are compelled to keep a list of outworkers employed by them, and to send a copy of the list to the Local Authority on or before the 1st February and August in each year. Five lists referring to seven persons were made out by employers during the year. None of the lists was sent in by the required dates. The outworkers were visited on 14 occasions; the surroundings under which the work was being done were found on the whole to be satisfactory.

Tables 16 to 20 furnish the returns annually required by the Home Office.

SANITARY ADMINSTRATION.

Work carried out by the various members of the Staff.

The three assistant medical officers inspect and re-examine school children, they have charge of patients in the corporation hospitals, they attend the school clinic, maternity centres, tuberculosis dispensary, and the out-patient department for venereal diseases. They also conduct the examinations of pathological material in the laboratory. The senior assistant medical officer is deputy medical officer of health.

The inspector of nuisances generally directs the work of the assistant inspectors, supervises the conversions of closets to the water carriage system, and is available for special investigations.

The three assistant inspectors of nuisances are district inspectors.

The nurses are employed in visiting houses in which a birth has occurred, in the supervision of midwives, in the medical inspection of school children, in following up cases of defect, and in the daily survey in the schools. They take part in the treatment of children at the school clinic, and act as tuberculosis nurses. They investigate cases of notifiable diseases, still births, and all deaths of children under five years of age. They also attend the maternity centres.

Bye-Laws and Regulations. The acts and regulations in force in the borough were tabulated in the report for the year 1914.

Borough Isolation Hospital.

This institution at Peasley Cross has on several occasions been enlarged and has floor space for about 100 patients. There are, however, under treatment at times as many as 180 patients.

There is no resident medical officer. Cases of scarlet fever, diphtheria, typhoid fever, puerperal fever, ophthalmia and venereal diseases are accepted, and other diseases such as cerebro-spinal fever, poliomyelitis, measles and whooping cough, influenza, pneumonia are admitted as occasion demands. The institution is totally inadequate to cope with the needs of the district, and there is, moreover, an arrangement whereby patients are taken in from the adjoining urban district of Haydock. There is hardly any means whereby observation cases, and instances of cross-infection can be isolated. Many of the patients are treated by their own practitioners, and are then expected to pay for the services rendered. There is no theatre for operations.

Eccleston Hall Sanatorium.

This is a modern institution providing accommodation for 70 persons suffering from pulmonary tuberculosis. There are three pavilions and four double-bedded shelters in grounds of about twenty acres. There is a resident medical officer.

Old Whint Hospital.

This is an old unsuitable structure, composed of an administrative block made by the adaptation of two cottages, and two pavilions, the newer of corrugated iron, the older of wood. The building was intended to be used as a small pox hospital. At the present time about fifty maternity and infant welfare patients are under treatment. There is no resident medical officer.

The staff on duty in the hospitals at the end of December consisted of a matron, 10 sisters, 17 staff nurses, 31 probationers, 51 female and 12 male servants.

Disinfecting Station.

The disinfecting station is situated at Peasley Cross hospital. Visits to 1,310 houses were made for the removal of clothing and bedding for disinfection by steam. A list of the articles disinfected is given in table 31.

Infected rooms are now sprayed with a solution of formalin and closed for four hours. During the year 3,446 rooms were disinfected.

Corporation Ambulances.

Two motor ambulances are kept at the Peasley Cross Hospital to convey patients to either of the corporation hospitals. During the year the total distance covered was 22,245 miles.

Mortuary.

The public mortuary is situated at the rear of the town hall, and consists of a brick building containing two rooms. Thirty-nine bodies have been placed in the mortuary during the year, and thirteen post-mortem examinations were conducted.

Laboratory.

A well-equipped laboratory is provided at the town hall. Examination of material from suspected cases of disease is carried out free of charge. The Council now arrange facilities at Liverpool University for the diagnosis of cases of venereal diseases, including the Wasserman Reaction for syphilis.

The number of specimens examined during the year is shown in table 32.

Anti-toxins are provided free for persons suffering from diphtheria and other diseases.

RATS AND MICE DESTRUCTION SCHEME.

In October, 1919, Mr. T. J. Kenny, M.R.C.V.S., was appointed executive officer. Early in November two whole-time rat-catchers were engaged from amongst several local applicants, and work was begun on the 10th November, 1919. Mr. Kenny reports as follows :—

It may at the outset be remarked that we are fortunate here in St. Helens as regards the chief industries carried on in the town, as they are not of such a nature as to be the cause of great attraction for rats, and further the premises of such industries do not generally serve as great harbouring and breeding places.

Nevertheless, it is not claimed that such premises are entirely free from rats, nor is it presumed that the buildings do not offer some safe resting places for these pests.

It has been found that the chief sources of trouble here are storerooms, shops and cellars, poultry houses and runs, pig courts and refuse dumps—consequently the results achieved are such as might be expected. Our numbers of killed and destroyed have not been high, but when the nature of infected places is considered it can readily be appreciated that a large amount of work has been entailed for comparatively small numbers.

It has been satisfactory to learn that in the majority of cases the premises have been entirely cleared and this frequently without much subsequent assistance in the way of prevention by the owners or occupiers. Some few difficulties have confronted us in the smooth working of the act. The chief one being that owners and occupiers of premises fail to realise their responsibilities in the matter notwithstanding the fact that notices pointing out such responsibilities were posted in prominent places within the borough. Why such misunderstandings should have arisen it is most difficult to explain. The possible damage that might accrue from a heavy and neglected infestation of rats was not for the moment considered. Another very real difficulty was that owners or occupiers could not understand why they had to pay for the work done. It was explained that everything possible was being done to make this scheme a self-supporting one. In the majority of cases the work done has satisfied them that the advantages derived have been a good return for the money paid, and in consequence this difficulty is rapidly disappearing.

The actual work of catching was commenced on November 10th, 1919, and was carried out by two men previously appointed by the health committee of the corporation. At the outset it was decided to charge for services of the man on a time basis. This was found to work unsatisfactorily, as frequently the charge was very high for a very small slaughter, while in other cases it appeared relatively low for a big catch. This method of charge was discontinued, and a uniform scale adopted of one shilling per rat caught. This has been found to work satisfactorily.

We adopted various methods of destruction, *e.g.* dogs and ferrets, traps, poisons, and rat varnish smeared on cardboard. Our experience of traps has not been fortunate. We found them almost useless, and it is our opinion that some of the elaborately constructed traps act more in the nature of a deterrent rather than an attraction.

As regards poisons our results have not been good. We have laid upwards of 1,000 baits—mostly in the nature of a trial—in likely places, and with the exception of one or two we have not found dead rats. This perhaps may be explained by the fact that the rats may have died in places which were inaccessible to us. We however tried the effects of the poison on a live rat kept in a cage for eight days. At the end of this time it was still alive and apparently in good health. The particular poison used was a mixture of barium carbonate and squills smeared on bread. We afterwards used barium carbonate alone, on bread, and though we did not use much of it the results to us did not appear to justify the continuation of its use. It must however be admitted that owing to the nature of infested places such as poultry runs, our use of poisons was rather restricted and was not a popular means of destruction with owners and occupiers.

By far our best results were obtained by means of dogs and ferrets. As a matter of act it has been our chief method all through. There were occasions when this method was not practicable, and then we found the rat varnish a very good substitute.

The two men worked continuously from November 10th, 1919, up to 9th October, 1920, and the following are results of carcases actually handled and destroyed during that period.

November,	1919	141
December,	,,	162
January,	1920	131
February,	,,	75
March,	,,	173
April	,,	153
May	,,	99
June	,,	193
July	,,	196
August	,,	132
September	,,	119
October	,,	28 (to the 9th day).
Total for 12 months		1602

These results were practically all obtained by means of dogs and ferrets. Rat varnish however smeared on thin pieces of cardboard and completely surrounding a suitable bait we have found satisfactory, the only objection to it being that owing to its nature it would be difficult to use and handle on a large scale.

On October 9th, 1920, the two men employed on the work resigned and there was an interval of a week pending the appointment of successors.

It transpired that there was only one man avaiable and though it was pointed out that for the method which to us appeared most successful, two at least were necessary, it was decided that a trial should be given to one man alone. Though he has worked well the results are not satisfactory, as it was impossible for him to control all possible points of exit with the inevitable result that many rats got away. It is hoped however that in the near future this difficulty will be remedied.

PREVALENCE AND CONTROL OF INFECTIOUS DISEASES.

SMALL POX. No instance of small pox was notified during the year. Fifteen contacts with cases occurring in other districts were kept under observation.

The number of notification and the number of deaths occurring from small pox in the borough since 1873 are given on table 45.

Although the town has been comparitively free from the disease for several years it is to be feared that the increasing number of the population unprotected by vaccination will afford suitable material for an extensive epidemic. Table 33 shows the extent of vaccination in St. Helens since 1897.

POLIOMYELITIS. One case of acute poliomyelitis was notified but proved to be a case of pneumonia. The patient died.

CEREBRO SPINAL MENINGITIS. One case of cerebro spinal fever was notified during the year.

ENCEPHALITIS LETHARGICA. Four notifications were received and the four persons died, one death being certified as cerebro spinal meningitis.

DIPHTHERIA. During the year 128 cases of diphtheria and membraneous croup with 13 deaths have been reported, giving an attack rate of 1.2 and a death rate of 0.12 per thousand of the population.

Table 36 sets out the record for previous years.

All the cases notified with two exceptions were removed to hospital. Table 34 gives a classification of the cases and the deaths according to the age of patients.

Arrangements were made for the routine bacteriological examination of the nose and throat of all persons living in the house from which a case of diphtheria was notified. In all 2,782 specimens were taken, mainly by health visitors, and examined during the year, and of this number 106 showed the presence of the organism causing diphtheria. The "Carrier" cases thus discovered were isolated either at home or in hospital, and treated with diphtheria anti-toxin and local applications of antiseptics.

School children attending classes in which diphtheria had occurred were subject to routine swabbing of the throat.

ERYSIPELAS.

Fifty-three cases of erysipelas were notified, and one death was stated to have taken place from the disease.

Fifteen cases were removed to the isolation hospital.

SCARLET FEVER.

During the year 474 notifications of scarlet fever were received and seven deaths were reported. The numbers for previous years are shown in table 36. The number of cases removed to hospital was 460. Table 35 gives a classification of the cases and deaths at various ages from scarlet fever during the year.

TYPHOID FEVER.

No case of typhoid fever was notified and no death was reported during 1920.

Table 41 gives the record for previous years.

PUERPERAL FEVER.

Thirteen women were reported during the year to be suffering from puerperal fever, and 6 deaths were stated to be due to the disease. Twelve of the cases were removed to hospital. Table 41 gives the figures relating to cases reported in previous years.

OPHTHALMIA.

Sixty-three children were notified to be suffering from ophthalmia. Thirty-one of the children were nursed at home, being attended by private practitioners and nurses from the school clinic, while of the more severe cases 32 were admitted into the isolation hospital. Of the 63 children notified as cases of ophthalmia, in 50 instances both eyes were uninjured at the end of the illness, in no instance did one or both eyes show opacities, and no child was blind in both eyes, 5 could not subsequently be traced, and 8 died.

MEASLES.

Measles is notifiable in the borough, according to the provisions of the Public Health (Measles and Whooping Cough, St. Helens) Regulations, 1914. The expected biennial epidemic began during the second week of October, 1919. Home nursing was provided by utilising the services of nurses at the school clinic and by drawing on the staff of the corporation hospitals. A pavilion at the isolation hospital was set aside for children seriously ill, and for those who could not be nursed satisfactorily at home.

More than the usual importance attaches to the course of this outbreak, because for the first time " contacts " were allowed to attend school under strict nursing supervision. The staff of health visitors was increased so that the borough might be divided up into twenty districts, each containing one or more schools, with a total of about 1,000 children in attendance. Arrangements were then made so that every child in each class could be rapidly surveyed by a nurse during the morning session, and particular care could be bestowed on children known to be a contact with infectious disease. This daily visiting of each class made it easy to send home any child who seemed to be ailing, and also enabled the medical officer to keep more closely in touch with any attempt of the disease to gain an entrance into the school. It may be stated at once that at no time did the epidemic appear to spread through the agency of the schools. To the thoroughness of the nursing supervision must be attributed the success of the experiment.

The number of cases of measles reported during the year 1920 was 2,960 with 56 deaths. Table 36 gives the record for previous years.

The deaths at various ages during 1920 are shown in table 37.

WHOOPING COUGH. Notifications of 287 cases of whooping cough were received, and 7 deaths were reported. Table 36 gives a record of the extent of the disease in other years.

DIARRHŒA. During 1920, 44 deaths were attributed to diarrhœa or enteritis, and of these thirty-six occurred in children under two years, being a death rate from these diseases of 10.7 per thousand births. Table 38 shows the deaths at certain age periods from both diseases.

The figures for other years are given in table 41.

The steps taken to prevent the loss of life from these diseases were given in the report for 1915, and need not be re-stated.

PNEUMONIA. During the year 148 notifications of pneumonia were received, and 148 deaths were certfiied to be due to the disease. Thirty patients were treated in the isolation hospital.

DYSENTRY. In all 17 instances of the disease were notified, and 1 death recorded. All the cases on investigation were found to have been first infected outside England.

Malaria. This disease was notified on 22 occasions. Four deaths were reported. Enquiries showed that all the patients were suffering from chronic malaria, contracted abroad. Mosquitos capable of transmitting malaria are to be found in the locality, therefore, under suitable conditions, an outbreak of the disease might occur.

Trench Fever. No notification of this disease was received during the year.

Tuberculosis. During the year, 240 notifications of pulmonary tuberculosis were received. Nineteen of the cases had been previously notified. Eighty-two deaths from the disease were recorded. In no instances were notifications first received after death had taken place. Table 41 shows the number of deaths stated to be due to the disease in past years.

Table 39 shows the division in age and sex groups of the primary notifications received.

The steps which are taken to prevent the spread of the disease are similar to those set out in the annual report of 1914.

Table 42 gives a record of cases admitted into Eccleston Hall.

Tuberculosis Non-Pulmonary. Sixty-seven notifications of tuberculosis other than pulmonary were received during 1920. Two of the cases have been previously notified. Thirty-seven deaths were recorded. Table 41 shows the number of deaths attributed to forms of tuberculosis other than pulmonary since 1873.

Tuberculosis Dispensary. The number of persons who attended during the year was 474. Of this number 234 were new cases. Of the new cases 190 or 81.2 per cent were found to be suffering from tuberculosis in one or other form. Of the total number of cases 110 were referred by the Ministry of Pensions, 52 being old cases who attended for treatment and 58 new cases referred for report or treatment or both.

The attendance at the dispensary has shown a steady increase and the average weekly attendance has grown from 71 during the first month of 1920 to 115 during the last month of the year. The highest weekly attendance was reached in December when 125 attended.

Of the 286 cases notified during the year 76 attended the dispensary. Of this number 27 were adults and 49 were children of school age. Of the latter number two only were notified by general practitioners, the remaining 47 being notified either by the school medical officer or the tuberculosis officer. Of those notified by the tuberculosis officer the great majority were either referred for examination and report by the school medical officer or were sent in by the health visitors for examination. Of the adults who attended 9 were notified by general practitioners and 18 by the tuberculosis officer. Of the former number 6 were advanced cases (66.6 per cent) and of the latter 5 or 27.7 per cent were advanced.

From these figures it is apparent, so far as children at any rate are concerned, that a thorough and systematic inspection of school children is of paramount importance, and should be regarded as an integral part of any system aiming at the prevention of tuberculosis. The great majority of these cases would otherwise never come under notice until, perhaps, they had passed into the second stage, or indeed, as has been the case, until they have reached the third stage. The great majority of them require constant medical supervision and treatment which, for one reason or another, would not be afforded them apart from the dispensary.

The great majority of adult cases do not at present ever pass through the dispensary, being dealt with in the first instance by their own medical advisors and then by the local insurance committee, which arranged for sanatorium or other treatment for them. That this system is a failure so far as the detection of the disease in an early stage is concerned, is revealed by an examination of the figures of notification and death registration during the year. Of the 221 cases of pulmonary tuberculosis notified for the first time during 1920, 51 died during the year and the average duration of life after notification in these cases was only 46.98 days. In no less than seven cases death occurred within one week of notification. Furthermore of the 82 deaths from pulmonary tuberculosis registered during 1920, 11 were not previously notified as suffering from the disease.

Up to the present hospital accommodation has not been generally provided by the Local Authority for instances of non-pulmonary tuberculosis. Table 40 gives the age and sex distribution of the notifications received. Steps similar to those previously detailed are taken to follow up and prevent the spread of infection.

The nurses made 173 first visits and 1,723 re-visits to the notified cases of tuberculosis.

VENEREAL DISEASES. St. Helens was one of the first towns to provide free facilities for the diagnosis and treatment of venereal diseases, and in 1920 further progress was made. A complete scheme for the treatment of persons suffering from venereal diseases has been approved by the Ministry of Health and is now in operation.

The scheme of the Council to prevent these diseases dates from 1915, when patients were first taken into the corporation hospital at Peasley Cross. The out-patient department is at the dispensary in Claughton Street. Men are treated on Mondays from 6 to 7 in the evening, women and children on Wednesdays from 7 to 8 p.m. The dispensary is open daily from 9 to 5–30 for advice, irrigation and prophylactic treatment.

A small pavilion accommodating 6 male and 6 female patients at Peasley Cross isolation hospital is used for persons needing in-patient treatment.

Bacteriological examinations are carried out at the Liverpool University. Practically all the specimens examined are taken at the dispensary. Figures relating to the number of patients treated are given in table 30. Three practitioners have been supplied with salvarsan substitutes. The Council from the first has been strongly of the opinion that the prevention of the diseases lies in the dissemination of knowledge of the means whereby the risk of infection can be obviated, and to this end the dispensary is open daily for preventative treatment and advice. A leaflet setting out the steps of self-disinfection can be obtained from the dispensary or from the medical officer of health.

ANTHRAX. On information received two consignments of shaving brushes appeared to have been sent to firms in St. Helens and there was reason to believe that certain of the brushes might be infected with anthrax. Steps were at once taken to trace the articles, but owing to the interval which had elapsed between the delivery of the brushes in St. Helens and the receipt of the warning it was only possible to collect 27, and 3 of this number were infected with anthrax.

No instance of human infection by anthrax was reported even though some of the brushes had been in daily use in barbers' shops.

CANCER.

Ninety-one deaths during 1920 were stated to be due to cancer and malignant disease. Table 41 gives the figures for previous years.

BRONCHITIS.

Two hundred and eighty-eight deaths were certified to be due to respiratory diseases other than tuberculosis. The number of deaths from these diseases in previous years is shown in table 36.

INQUESTS.

The number of deaths which took place from violence was 62. Seventy-five inquests were held and 13 post-mortem examinations were carried out.

UNCERTIFIED DEATHS.

In no less than forty-eight instances a death was registered without the cause of death being certified by a medical practitioner.

MATERNITY AND CHILD WELFARE.

MILK (MOTHERS AND CHILDREN) ORDER, OCT., 1919.

Under the powers conferred by this order the Council has distributed during the year 1920, 50,840 lbs. of full cream sweetened milk powder.

FOOD PARCELS.

Food parcels containing peas or lentils, margarine, cocoa, syrup, cheese, oatmeal, rice and pressed beef to the value of 4/11 each were distributed during 1920 to the total value of £1,480.

All food parcels and milk powder are given out on the certificate of the medical officer of health after enquiry has been made into the home circumstances. The maternity centres are the centres for distribution and mothers to whom parcels and milk are given are expected to bring their children to the centre at regular intervals.

The regulations governing the distribution of food and milk are as follows :—

1—No parcel or free milk to be given where the husband is in employment.

2—Where the husband is unemployed and the income per head, after deduction of rent is 10/- per week or less free milk or free parcel is given.

3—If the income per head is from 10/- to 12/6 milk may be given at half-price, but no parcel, 4—Where there is only one wage earner in the family and the number of children exceeds five milk may be supplied at half price to children under two years of age.

The full price of milk powder is 2/6 per pound.

SUPERVISION OF MIDWIVES.

At the close of 1920, 33 women gave notice of their intention to practice as midwives in the borough during the ensuing year. The qualifications of these were: Central Midwives Board Certficate—19. Other recognised certficate—9. Untrained—5.

The Health Visitors paid 55 routine and 35 special visits to supervise the practice of midwives. Although the number of untrained midwives is steadily decreasing, midwifery is not sufficiently remunerated to attract well qualified capable women.

Approximately 99 per cent of the total births occurring in the borough were attended by midwives and no instance was discovered of a birth being attended by an uncertified midwife.

STILL BIRTHS.

The number of still births notified during the year was 40. This figure is undoubtedly much too low, and it is evident that many children born dead after the expiration of the 28th week of pregnancy escaped notification.

MEDICAL AIDS.

In accordance with the rules of the Central Midwives Board a midwife must advise that medical assistance shall be obtained in any case where abnormal conditions occur during the confinement or in the lying-in period. Medical assistance was obtained on 1,258 occasions.

According to the requirements of the Midwives Act 1918, the Council pays the fees of medical men who are called in to assist midwives and for this purpose the sum of £1,961/15/– was expended during 1920.

MATERNITY AND INFANT WELFARE CENTRES.

Maternity and infant welfare centres are established at the Town Hall (open 5 days a week), Oxford Street (open 3 days a week), Marshalls Cross (open one day a week), and Elizabeth Street, Sutton (open one day a week). A new centre has been built in Albion Street and this centre will take the place of the one in Oxford Street.

The attendances at these centres are increasing rapidly and now require the services of two medical officers and four nurses for five afternoons a week.

During 1920, 23,292 attendances were made by mothers, 23,625 by children under five years of age and 1,107 by expectant mothers, giving an aggregate of 48,024 attendances for the year.

The total attendances for 1919 were 19,325.

HOME VISITS.

The health visitors paid 1,435 visits to expectant mothers, 3,370 first visits and 28,863 subsequent visits to infants and children under five years of age.

DENTAL TREATMENT OF NECESSITOUS MOTHERS.

Twenty-six necessitous mothers received dental treatment at the school clinic in Claughton Street during 1920.

MINOR AILMENTS.

Three hundred and fifty-five mothers and children received treatment for minor ailments at the school clinic during the year.

INFANTILE MORTALITY.

During the year 3,334 births were registered, and 378 deaths of infants under 1 year of age were notified, giving a mortality of 113.3 per thousand registered births.

Table 46 shows the infant death rate in St. Helens since 1873 and also the figures for England and Wales. Enquiry is made respecting the death of every child under five years of age.

VITAL STATISTICS.

Births.

The number of births registered during 1920 was 3,259. Eighty-four occurring in other districts were transferable to St. Helens, and 9 occurring in the borough were transferred to other districts, making a total of 3,334. The birth rate for the year was 31.8 showing an increase in the figures for the previous years. The chart on table 48 shows that an alarming decline has occurred in the birth rate for St. Helens since 1873 ; the rate for St. Helens however is still above that for the rest of the country. Table 49 gives the birth rate in the various wards of the town.

Illegitimate Births.

There were 93 illegitimate births registered, 41 occurring in other districts were transferable to St. Helens, and 3 occurring in the borough were transferable to other districts, making a total of 131. The illegitimate birth rate was 1.2 per thousand of the population. Table 50 shows the proportion of illegitimate births during past years.

Marriages.

The number of marriages during the year has been 882 giving a rate of persons married of 16.8 per thousand of the population. Table 51 shows the rate for past years.

Deaths.

The total number of deaths registered as having taken place within the borough during the year was 1,329. Of these 100 were deaths in St. Helens of persons usually resident in other parts, and were transferred by the Registrar General to the other districts to which they belonged ; 190 deaths of persons usually living within the borough occurred in other places, giving a total of 1,419 as the actual number of deaths to be accepted in estimating the death rate for the year, and a recorded death rate of 13.5 per thousand of the estimated population. Table 48 gives figures for the borough since 1873.

The death rates in the different wards for 1920 are set out in table 52.

Figures relating to the causes of and ages at death during the year are given in table 54.

In addition to the usual monthly statements of births, deaths and infectious diseases many special reports have been made to the committee by the medical officer of health.

HOUSING.

General Housing Conditions.

In accordance with the instructions of the Ministry of Health a survey of the housing needs of the district was begun in September, 1919, and completed by the end of October.

The results of the enquiry showed that there were at that time in the borough 17,963 dwelling houses, and of this number, 17,100 were for the working classes. Four new houses were erected during the year 1919, but at the end of the year none was being built.

There appears no reason to anticipate a reduction in the population.

It was considered that 4,630 houses for the working classes were needed within three years to meet the needs of the district.

Over-crowding.

The amount of overcrowding in St. Helens is a menace to the health of the district. At the time of the survey it was estimated that there were 4,200 houses with more than two occupants per room, and that in 1,760 instances two or more families were living in houses only intended for one family.

At the time of the last census in 1911 St. Helens had 16 per cent of overcrowding, it is now considered that there is 24 per cent.

The cause of the overcrowding is a long standing deficiency of houses suitable for the working classes.

No legal proceedings to deal with cases of overcrowding have been taken during the year and none can usefully be instituted until new houses are provided.

Fitness of Houses.

The general standard of housing in the district is low, although in a few areas cottage property can be found of a good type. The defects more commonly met with in the unfit houses are leaking roofs, and spouting, damp walls, defective plaster, absence of pantry and wash boiler, insanitary surface of yards, dilapidated ashplaces and insufficient yard space.

During 1920 no action was taken under the Housing Acts, but statutory notices under Public Health Acts were served in the cases of the more important defects. The chief difficulties in remedying nuisances are, firstly, the long interval which elapses between the discovery of the defect and the service of a statutory notice, secondly, the delay in instituting magisterial proceedings in cases of default.

UNHEALTHY AREAS.

No area has yet been represented as unhealthy under parts 1 or 2 of the Housing Act of 1890. In the survey carried out in 1919 it was stated that three areas of approximately 47 acres in all, might have to be dealt with as unhealthy—the total number of houses in these areas is about 1,214, containing 6,918 persons.

At present there is no accommodation for the dispossessed.

POSITION WITH REGARD TO NEW HOUSES.

The position with regard to new houses at the end of 1920 was that a building scheme had been begun on part of the Windlehurst Estate, but no houses were in course of erection.

Sites had been approved by the Ministry at Clock Face, Blackbrook, Sutton Manor and Redgate.

APPENDIX A.

REPORT ON THE WINDLE BROOK.

The Windle Brook enters at the Windle Bridge, Kiln Lane, and flows past the recreation ground of Messrs. Pilkington Brothers, Ltd., where it is joined by a ditch coming from Knowsley Road which takes the overflow from a manure cess-pool on Fairclough's Farm.

The brook is open and its condition can readily be observed up to Dilloway Street where No. 1 sample was taken.

In taking the various samples care was exercised not to disturb the sediment at the bottom, and as there had been no rain for some time previous, the samples submitted gave a good average indication of the water at the different points.

The analyst's report is as follows :—

No. 1 Sample (Dilloway Street)	Per 100,000 parts.
Mineral suspended matter	0.10
Organic suspended matter	0.00
Total residue on evaporation	34.00
Oxygen absorbed in 4 hours at 80 F.	0.50
Free ammonia	0.004
Albuminoid ammonia	0.020
Chlorine	2.20

" This is a water such as I find in clean, unpolluted country streams, and it has not been contaminated in any way."

The brook is now underground flowing through the Queen's Recreation Ground and turning at Boundary Road passes between Lowe Street and Kirkland Street.

Surface and storm water sewers are connected with the brook in this locality and during a storm sewage also overflows into the brook.

Crossing under Westfield Street the brook is open for a short distance at the foot of Green Street where No. 2 sample was taken, the condition here is much worse and there is evidence of sludge deposits at the sides. The water however is clear.

The analyst's report is as follows :—

No. 2 Sample (Green Street).	Per 100,000 parts.
Mineral suspended matter	0.20
Organic suspended matter	0.00
Total residue after evaporation	63.00
Oxygen absorbed after 4 hours at 80 F.	0.40
Free ammonia	0.160
Albuminoid ammonia	0.022
Chlorine	3.50

"This sample is not quite as good as No. 1, and I think a little sewage matter has got in between the points 1 and 2, but there are no signs of any chemical or manufacturing contamination and the stream would still be considered quite satisfactory as a country brook."

The samples being taken in dry weather there would be less possibility of contamination at this point.

From Green Street to Bridgewater Street the brook is covered but appears open behind Tontine Street. Here the volume is greatly increased and the colour of the water varies from brown to inky black and there is a very pungent smell.

Number 3 sample taken at this point gives the following analysis :—

	Per 100,000 parts.
Mineral suspended matter	11.60
Organic suspended matter	7.80
Total residue on evaporation	207.50
Oxygen absorbed in 4 hours at 80 F.	12.40
Free ammonia	0.53
Albuminoid ammonia	0.15
Chlorine	2.80
Free sulphuretted hydrogen	4.04
Copper in suspended matter	Trace.

"An enormous change has taken place in the water between the points 2 and 3. A large amount of effluent has been discharged into it and this is mainly such as would come from chemical works. In my opinion the main contamination at this point is from alkali waste and the stream is now a stinking nuisance."

The cause of this pollution at Bridgewater Street is due to a culvert which enters into the brook and conveys chemical liquor which is mainly soakage from the chemical heaps as shown in the plan. The liquor is caught in a series of manholes or catch-pits and conveyed to a sedimentation tank in the United Alkali Company's works and from there into a culvert in Canal Street.

A number of samples dealing with this particular drain were taken from its commencement at the chemical heaps until it enters the culvert in Canal Street.

The analysis is as follows :—

	Per 100,000 parts.			
	A	B	C	D
Total residue on evaporation	3670.0	1240.0	910.0	940.0
Combined lime	990.0	240.0	120.0	140.0
Total sulphur	3224.2	1131.9	788.9	857.0
Free sulphuretted hydrogen	1108.7	265.1	130.9	135.0

" A, B, C. D, are obviously drainage from alkali works which becomes diluted as it passes from A to C."

Sample E is taken from the end of the culvert where it enters the brook at Bridgewater Street and contains :—

	Per 100,000 parts.
Total residue on evaporation	200.0
Combined lime	40.0
Total sulphur	102.0
Free sulphuretted hydrogen	5.27

" Sample E may be described as a water contaminated with alkali waste and is something like the sample No. 3 as above."

There is a large amount of sludge due to precipitation in the culvert between D and E, this will account for the difference in the result of the analysis between these two points.

There is another culvert emptying into the brook from Canal Street, this appears to carry surface water from Messrs. Pilkington Brothers' works.

The analysis from the outlet is as follows :—

Sample F.	Per 100,000 parts.
Total residue on evaporation	160.0
Combined lime	35.0
Total sulphur	70.0
Free sulphuretted hydrogen	2.2

" F is a considerably better water, slightly contaminated by alkali waste."

The brook which is now open for a considerable distance flows behind Tontine Street and is very foul, it receives surface drainage from houses in Tontine Street and sewage from closets at Messrs. Daglish's foundry. It crosses under the canal near the copper works, re-appearing near the London and North Western Railway, from whence it passes through Messrs. Todd Brothers' yard into the Gas Works.

Drains from Kurtz works enter here and convey surface water and the contents of 10 water closets.

The pollution added from the gas works consists of the effluent from sulphate tanks, gas water, tar effluent and the contents of 12 water closets and also surface water.

No. 4 sample was taken after the brook left the gas works and the analysis is given as follows :—

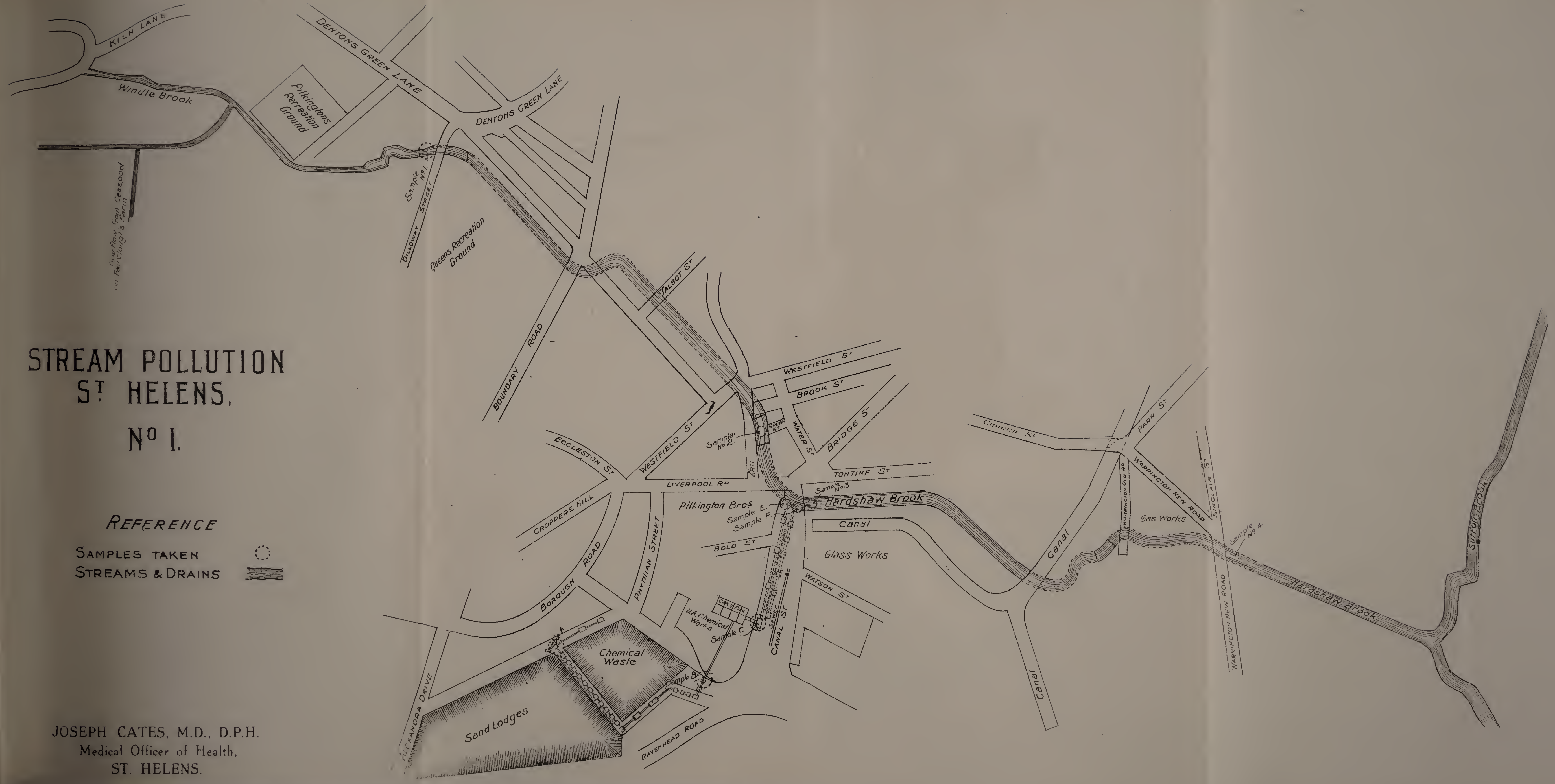
Warrington New Road.	Per 100,000 parts.
Mineral suspended matter	75.30
Organic suspended matter	46.90
Total residue on evaporation	209.00
Oxygen absorbed in 4 hours at 80 F.	14.00
Free ammonia	3.76
Albuminoid ammonia	0.16
Chlorine	39.68
Free sulphuretted hydrogen	Nil.
Copper in suspended matter	17.73

" At this point we have No. 3 water with some added contamination which obviously comes from copper works and gas works. The free sulphuretted hydrogen has disappeared, partly by oxidation, partly by the action of the copper.

There is a film of tar on the water. The sample can only be described as a foul, heavily polluted water."

The brook now passes through the Hardshaw Brook Chemical Works where a workmen's water closet discharges into it and it then joins the Sutton Brook beyond Langtree Street.

STREAM POLLUTION
St HELENS.
No I.



REFERENCE

SAMPLES TAKEN ◌

STREAMS & DRAINS ▨

JOSEPH CATES, M.D., D.P.H.
Medical Officer of Health,
ST. HELENS.

APPENDIX B.

REPORT ON THE RAINFORD AND SUTTON BROOKS WHICH UNITE TO FORM THE SANKEY BROOK.

Rainford Brook enters the borough at Gerards Bridge. Sample No. 1 was taken at Gerards Bridge. The analyst reports as follows :—

	Per 100,000 parts.
Mineral suspended matter	73.00
Organic suspended matter	4.00
Total residue on evaporation	160.00
Oxygen absorbed in 4 hours at 80 F.	0.47
Free ammonia	0.17
Albuminoid ammonia	0.04
Chlorine	11.00
Free sulphuretted hydrogen	Nil.
Copper in suspended matter	0.06
Combined lime	38.00
Total sulphur	60.36

"This is an ordinary brook water and is quite inoffensive. It has apparently received a certain amount of manufacturing waste, but not enough to cause any nuisance."

The cottages adjacent to Gerards Bridge drain into the brook, a 6″ pipe carrying surface and washing water is seen through the Boundary wall.

The colour seen in the water is apparently derived from manufacturing waste heaps near by.

Sample No. 2 was taken at the Railway Bridge near Blackbrook Road. The analysis is as follows :—

	Per 100,000 parts.
Mineral suspended matter	34.50
Organic suspended matter	6.50
Total residue on evaporation	194.00
Oxygen absorbed in 4 hours at 80 F.	.80
Free ammonia	.26

Albuminoid ammonia	.04
Chlorine	11.40
Free sulphuretted hydrogen	Nil.
Copper in suspended matter	.05
Combined lime	46.00
Total sulphur	79.57

"This sample is very much like to No. 1 Rainford Brook, except that it has received a considerably greater amount of manufacturing waste. It is still quite inoffensive and not liable to cause any nuisance."

The red colour is greatly pronounced here owing to soakage from trade refuse heaps.

The Rainford Brook joins the Sutton Brook at Park Road.

SUTTON BROOK.

This brook receives sewage from house drains near Parr Manure Depot and also washings from waste heaps during the course.

Hardshaw Brook (which is referred to in Appendix A) joins Sutton Brook near Langtree Street.

SANKEY BROOK.

This brook is formed by the junction of the Rainford and Sutton brooks and follows the course of the canal from Park Road.

Passing the corporation sewage disposal works it receives the treated effluent and a large amount of crude sewage.

A sample of effluent was taken here and is marked "No. 2 Treated Effluent."

The following is the analysis :—

	Per 100,000 parts.
Mineral suspended matter	279.50
Organic suspended matter	32.50
Total residue on evaporation	78.00
Oxygen absorbed in 4 hours at 80 F	4.00
Free ammonia	2.90
Albuminoid ammonia	.10
Chlorine	15.60
Free sulphuretted hydrogen	0.80

Copper in suspended matter	0.13
Combined lime	22.00
Total sulphur	16.46

" This effluent has a very offensive smell and contains far too much suspended matter to be discharged into any brook, because it will certainly give rise to a nuisance."

At the time of taking the samples only a small portion of the town's sewage was being treated, the remainder was turned direct into the brook.

A sample of this was taken (Sample No. 3 Raw sewage entering Sankey Brook). The analysis shows :—

	Per 100,000 parts.
Mineral suspended matter	12.00
Organic suspended matter	122.50
Total residue on evaporation	100.00
Oxygen absorbed in 4 hours at 80 F.	2.22
Free ammonia	4.70
Albuminoid ammonia	0.10
Chlorine	15.80
Free sulphuretted hydrogen	3.75
Copper in suspended matter	0.04
Combined lime	18.00
Total sulphur	12.34

" This sewage has a very offensive smell and contains far too much suspended matter to be discharged into any brook, because it will certainly give rise to a nuisance."

The sewage works are outside the borough.

Some little way further down the course of the brook a culvert conveying untreated sewage from the whole of St. Helens Junction District enters, a sample was taken from the culvert. The analysis shows :—

Sample No. 4. Raw sewage from Culvert.	Per 100,000 parts.
Mineral suspended matter	11.00
Organic suspended matter	11.00
Total residue on evaporation	68.00
Oxygen absorbed in 4 hours at 80 F.	4.84
Free ammonia	2.50

Albuminoid ammonia	0.10
Chlorine	6.00
Free sulphuretted hydrogen	2.14
Copper in suspended matter	0.05
Combined lime	16.00
Total sulphur	13.03

"This sample is much more dilute than No. 3 sewage and therefore would not cause so much nuisance when discharged into a stream, but even so in my opinion it is far too much charged with organic matter to be allowed to run into any stream or brook."

Beyond this point to where the brook leaves the Borough there appears to be no other form of pollution.

STREAM POLLUTION ST. HELENS.

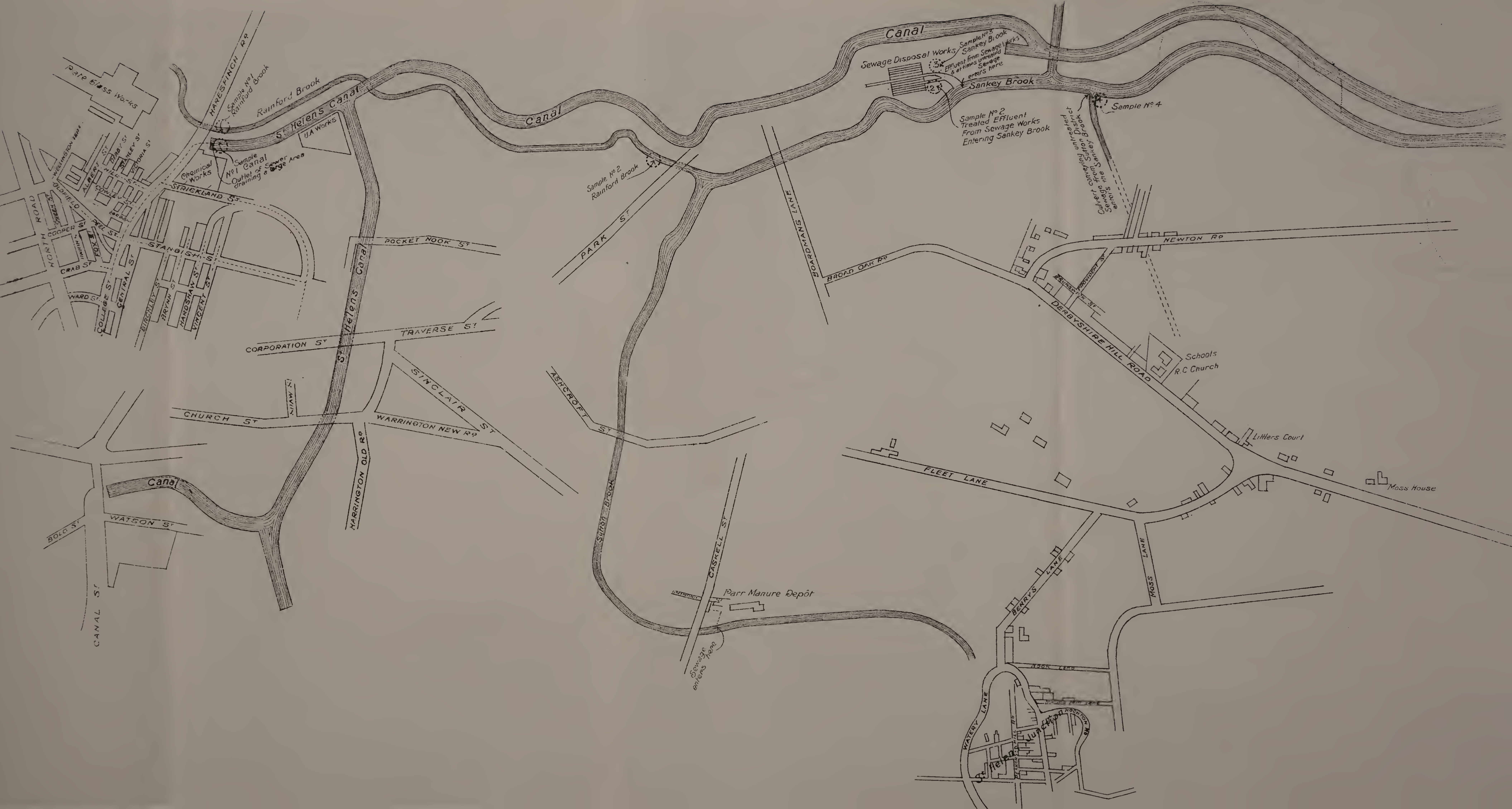
No2.

REFERENCE

SAMPLES TAKEN ◌

STREAMS & DRAINS ▨

SEWERS - - - - - - -



JOSEPH CATES, M.D., D.P.H.
Medical Officer of Health,
ST. HELENS.

APPENDIX C.

A REPORT ON THE POLLUTION OF THE ST. HELENS CANAL.

The end of the canal is at Bridgewater Street, off Liverpool Road, St. Helens, tracing it towards where it joins the main portion of the canal at Gerards Bridge waste water enters from Messrs. Pilkington Brothers' works on its banks. There appears however to be no serious pollution from this source.

Waste water also enters from the United Alkali works near Gerards Bridge.

Here this portion of the canal joins the main part of the canal.

The end of this main portion is at Gerards Bridge, where a very serious pollution takes place owing to the fact that drainage from a large area of the town around enters the end of the canal as shown on the plan following this Appendix.

The natural inclination of the ground in the Gerards Bridge and adjacent areas is towards the canal.

The sewers and drains (shown in red on the plan) are on the combined system carrying both sewage and storm water.

The highest point of the main sewer appears to be at a manhole in the centre of the roadway near the Old Mill in College Street.

From here the combined sewer falls towards the canal as shown and during its course takes the drainage from the whole of the area up to Wellington Terrace near North Road, including the Glass Works and bounded by Oldfield and College Streets up to the old mill on the left of College Street.

Drains from the houses on the right hand side of College Street (below the Old Mill), also Central Street, Standish Street and the new streets in the Hardshaw area join this sewer.

Near the chemical works a sewer is carried along Strickland Street up to behind the Parish Church Schools, this takes the drainage from a large number of houses in the Hardshaw area. This sewer joins the main sewer in College Street, From this evidence it will be seen that the canal at Gerards Bridge for some distance is extensively polluted with sewage and is in fact a huge cesspool.

Sample No. 1 was taken here, and the analyst's report is as follows :—

	Per 100,000 parts.
Mineral suspended matter	85.50
Organic suspended matter	196.00
Total residue on evaporation	150.00
Oxygen absorbed in 4 hours at 80 F.	8.80
Free ammonia	9.65
Albuminoid ammonia	0.60
Chlorine	14.00
Free sulphuretted hydrogen	1.47
Copper in suspended matter	0.12
Combined lime	22.00
Total sulphur	8.91

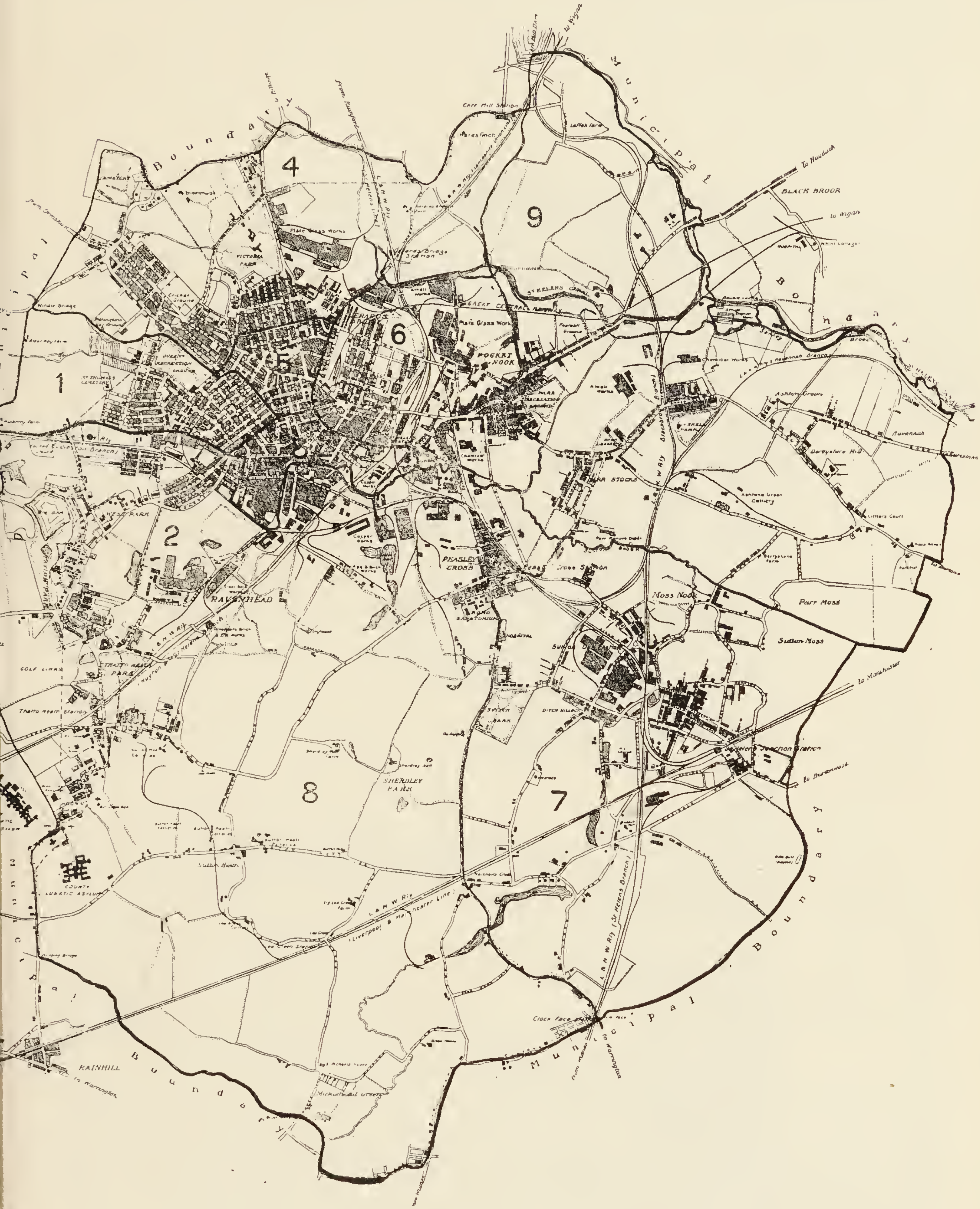
" This is a very foul and heavily polluted water. If it were to be considered as itself an effluent it would be held to be far too bad to discharge into any other stream."

The main canal at a lower point receives drainage from the waste heaps, and opposite a horse slaughtering premises a 15″ pipe discharges into it.

From this point the canal was traced to the borough boundary but no other source of pollution was discovered.

Table 1.

Showing the position of the wards, the acreage, estimated population for 1920, and the density of each, calculated on the approximate area built upon.



The population, acreage, and density of persons in each ward.

	WARD.	Population.	Area in acres.	Approximate Acreage unbuilt on.	Persons per Acre built upon.
1	North Eccleston ...	13,302	235·439	135	132
2	South Eccleston ...	12,890	621·625	448	74
3	Central	6,877	94·459	2	74
4	North Windle	13,234	697·084	447	52
5	South Windle	8,988	67·116	0	133
6	Hardshaw............	12,516	342·684	160	68
7	East Sutton	12,573	1,312·319	1,190	102
8	West Sutton.........	11,186	2,429·151	2,300	86
9	Parr	13,256	1,484·550	1,394	146

Table 3.

The population of the borough at each census period.

Census of	*1801	*1811	*1821	*1831	*1841	1851	1861	1871	1881	1891	1901	1911
Eccleston ..	1,362	1,584	1,931	3,259	6,247	–	–	–	–	–	–	–
Sutton......	1,776	2,114	2,329	3,173	4,095	–	–	–	–	–	–	–
Parr	1,183	1,405	1,523	1,942	3,310	–	–	–	–	–	–	–
Windle	3,252	4,294	4,820	5,825	6,918	–	–	–	–	–	–	–
St. Helens..	7,573	9,397	10,603	14.199	20.570	25,660	38,135	45,548	57,940	72,413	84,410	96,550

* Previous to 1851, the populations given are those of Eccleston, Sutton, Parr, and Windle, and are not strictly comparable to those of the present borough.

Table 4.

Population of the various wards as shown by census returns.

WARDS.	Area in Statute Acres (Land and Inland Water).	Families or Separate Occupiers.		POPULATION.				Institutions, Large Establishments, Vessels, etc., 1911 (included in (cols. 4 & 6).	
		1901	1911	1901 Persons	1911 Persons	1911 Males	1911 Females	Number	Population.
1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
St. HELENS....	7,284	15,390	17,833	84,410	96,551	50,309	46,242	28	1,981
North Eccleston...	235·43	—	2,253	10,551	12,252	6,425	5,827	—	—
South Eccleston...	621·62	—	2,337	8,835	11,873	6,036	5,837	—	—
Central	94·4	—	1.077	5,235	6,336	3,457	2,879	12	369
North Windle	697·08	—	2,446	11,457	12,188	6.057	6,131	—	—
South Windle	67·11	—	1,533	8,315	8,279	4,261	4,018	1	59
Hardshaw	342·68	—	2,160	9,690	11,526	6,128	5,398	6	250
East Sutton	1,312·31	—	2,179	9,524	11,584	6.186	5,398	3	133
West Sutton	2,429·15	—	1,653	9,524	10,304	5,278	5,026	5	1,040
Parr	1,484·53	—	2,195	10,014	12,209	6,481	5,728	1	130

Table 2.

TOTAL RAINFALL IN INCHES IN ST HELENS SINCE 1890

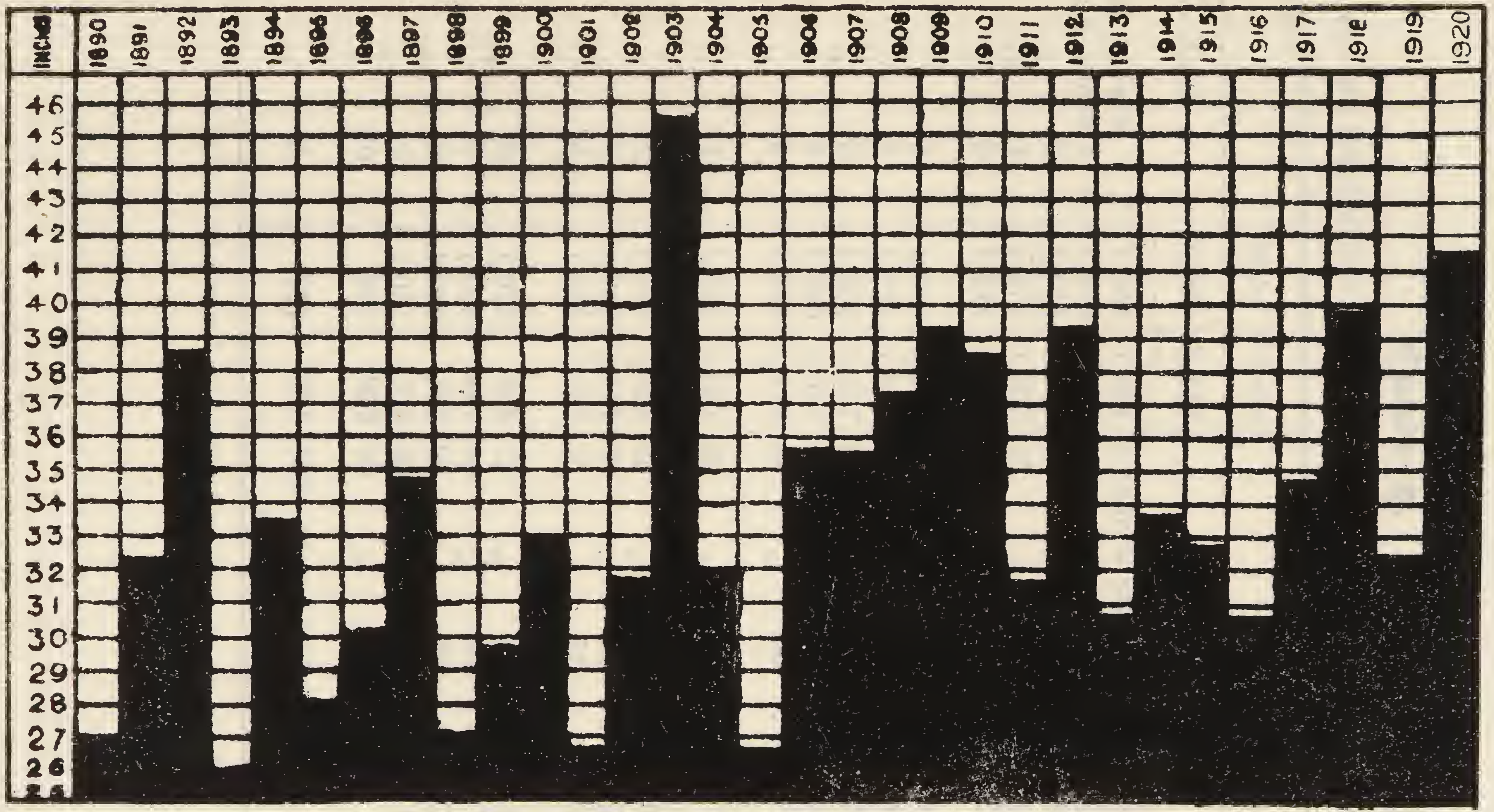


Table 5.

The age and sex distribution of the population at the census taken in 1911

	Males	Females		Males.	Females
ALL AGES	50,309	46,242			
Under 1 year ...	1,344	1,301	Under 5 years ...	6,462	6,285
1 and under 2 ...	1,250	1,269	5 and under 10 ...	5,918	5,767
2 ,, 3 ...	1,348	1,325	10 ,, 15 ...	5,419	5,332
3 ,, 4 ...	1,276	1,208	15 ,, 20 ...	5,165	4,475
4 ,, 5 ...	1,244	1,182	20 ,, 25 ...	4,755	4,021
5 ,, 6 ...	1,178	1,146	25 ,, 30 ...	4,271	3,773
6 ,, 7 ...	1,234	1,213	30 ,, 35 ...	4,001	3,440
7 ,, 8 ...	1,206	1,187	35 ,, 40 ...	3,635	3,080
8 ,, 9 ...	1,150	1,097	40 ,, 45 ...	2,812	2,487
9 ,, 10 ...	1,150	1,124	45 ,, 50 ...	2,424	2,154
10 ,, 11 ...	1,106	1,091	50 ,, 55 ...	1,917	1,690
11 ,, 12 ...	1,083	1,077	55 ,, 60 ...	1,411	1,345
12 ,, 13 ...	1,103	1,084	60 ,, 65 ...	910	953
13 ,, 14 ...	1,062	1,041	65 ,, 70 ...	652	651
14 ,, 15 ...	1,065	1,039	70 ,, 75 ...	349	478
15 ,, 16 ...	1,033	946	75 ,, 80 ...	141	231
16 ,, 17 ...	1,058	887	80 ,, 85 ...	51	64
17 ,, 18 ...	1,036	862	85 ,, 90 ...	12	14
18 ,, 19 ...	1,081	878	90 ,, 95 ...	4	2
19 ,, 20 ...	957	902	95 ,, 100 ...	—	—
20 ,, 21 ...	951	835	100 years and upwards	—	—

Table 6.

The population of the various institutions in the borough.

INSTITUTION.	1911.							1920.						
	Special Inmates (Patients, Paupers, Lunatics, etc.)			Officials and their Families.			Total.	Special Inmates (Patients, Paupers, Lunatics, etc.)			Officials and their Families.			Total.
	Persons	Males	Females	Persons	Males	Females	Persons	Persons	Males.	Females	Persons	Males.	Females	Persons
County Asylum (part of) Rainhill........	814	388	426	121	43	78	935	852	415	437	186	78	108	1038
Providence Hospital..	69	44	25	32	—	32	101	66	37	29	37	2	35	103
St. Helens Hospital..	88	64	24	37	2	35	125	91	—	—	—	—	—	—
Corporation Hospital, Peasley Cross ..	65	32	33	40	2	38	105	56	22	34	75	6	69	131
Blackbrook House Industrial School for Roman Catholic Girls	111	—	111	19	—	19	130	90	—	90	12	—	12	102

Table 7.

The number of houses with the various types of sanitary conveniences existing in the borough.

Year.	Water closet.	Tub and pail closet.	Privy midden.	Total.
1907 ...	6,106	7,150	5,154	18,410
1908 ...	6,503	7,120	4,907	18,530
1909 ...	6,718	7,071	4,795	18,584
1910 ...	7,041	7,028	4,616	18,685
1911 ...	7,626	6,863	4,338	18,827
1912 ...	9,205	5,734	4,019	18,958
1913 ...	10,493	5,058	3,542	19,093
1914 ...	12,316	4,058	2,829	19,203
1915 ...	13,100	3,704	2,529	19,333
1916 ...	13,298	3,592	2,472	19,362
1917 ...	13,455	3,422	2,353	19,230
1918 ...	13,504	3,401	2,325	19,230
1919 ...	13,794	3,259	2,177	19,230
1920 ...	14,447	2,890	1,893	19,230

Table 8.

The number of conversions to the water carriage system completed each year since 1904.

Year.	Privies.	Tub and pail closets.	Total.
1904	69	67	136
1905	80	64	144
1906	47	19	66
1907	237	125	362
1908	243	24	267
1909	106	38	144
1910	179	33	212
1911	270	129	399
1912	301	691	992
1913	460	646	1,106
1914	691	976	1,658
1915	300	380	680
1916	57	112	169
1917	45	103	148
1918	18	21	39
1919	148	142	290
1920	284	369	653

Table 9.

Number of notices served

Reason for Inspection and Notice.	Preliminary notices served 1920	Statutory notices served 1920	Number remedied 1920	Number *not* remedied at end of year. 1920
To clean choked drains and w.c.'s.. ..	238	78	238	0
,, repair or relay defective drains ..	71	22	66	5
,, drain dwelling-houses..	0	0	1	0
,, disconnect and ventilate drains ..	1	0	1	0
,, disconnect downspouts..	0	0	0	0
,, repair or lengthen waste pipes to slopstones	66	38	52	14
,, provide waste pipes to slopstones ..	29	30	26	3
,, provide slopstones	17	6	17	0
,, repair w.c.'s, baths, basins, lavatories and cisterns	130	24	127	3
,, repair roofs of dwelling-houses ..	211	165	167	44
,, cleanse backyards, privies & passages	1	2	1	0
,, cleanse and whitewash filthy dwellings	12	4	11	1
,, provide doors to privies, pail closets, and ashpits	488	417	479	9
,, repair or rehang doors to pail closets, ashpits and privies	6	11	4	2
,, repair privies and ashpits	36	16	31	5
,, repair eaves and downspouts	133	68	88	45
,, provide eaves and downspouts ..	37	46	23	14
,, repair pavement, etc., in yards ..	83	54	68	15
,, re-hang windows	78	66	60	18
,, repair pavement and floors in dwelling-houses	74	77	30	44
,, remove fowls, pigeons, etc., from near dwellings	4	0	4	0
,, remove pigs	1	0	1	0
,, remove rubbish	6	3	6	0
,, remove manure..	1	0	1	0
,, reconstruct middensteads	0	0	0	0
,, clean foul ditches and cesspools ..	0	0	0	0
,, provide or repair ashboxes	11	7	11	0
,, remove nuisance due to overcrowding	6	1	6	0
,, replaster walls or ceilings of dwellings	297	241	208	89
,, prevent, dampness in dwellings ..	85	75	75	10
,, remedy defects in workshops.. ..	2	0	2	0
,, remedy defects in cowsheds & dairies	0	0	0	0
,, provide water supply	2	1	1	1
,, remedy miscellaneous nuisances ..	339	231	266	73
,, convert to water carriage system ..	25	610	653	95
Totals	2490	2293	2724	490

Table 10.

Metric tons of total solids per square Kilometre deposited during the year 1920.

A metric ton per square Kilometre is approximately 9lbs. per acre.

LONDON	Meteorological Office	150·61
	Finsbury Park	96·82
	Ravenscourt Park	108·56
	Southwark Park	133·11
	Wandsworth Common	100·31
	Golden Lane	142·85
	Malvern	31·15
	Southport (Hesketh Park)	77·06
	Southport (Wood Oak Moss)	66·06
	St. Helens	174·77

Table 11.

Number of animals slaughtered and amount of diseased meat destroyed during 1920.

	ABATTOIR.				PRIVATE SLAUGHTER HOUSES.			
1920	Killed.	Diseased.		Weight in lbs.	Killed.	Diseased.		Weight in lbs.
		Tuberculosis.	Other diseases.			Tuberculosis.	Other diseases.	
Beasts	4,429	386	493	35,620	—	—	—	—
Calves	1,157	20	14	220	—	—	—	—
Sheep	2,577	—	16	131	—	—	—	—
Pigs	4,807	79	116	7,468	2,515	91	28	1,674

About 13,230 lbs. of fish, 2,887 lbs. rabbits and poultry, 8,038 lbs. fruit and vegetables, and a quantity of other foodstuffs were found to be unsound and were destroyed.

Table 12.

The results of analyses of milk samples.

	Per Cent.	FAT. Under 2·7	2·8	2·9	3·0	3·1	3·2	3·3	3·4	3·5	Over 3·5	Total.
NON-FATTY SOLIDS.	Under 8·1			2					1			3
	8·2											
	8·3										1	1
	8·4						1				1	2
	8·5				1		1	1			4	7
	8·6	1	1			1	1	2	1	3	17	27
	8·7	2			3	4	3		3	1	21	37
	8·8	2				4	2	5	5	3	22	43
	8·9			1	2	3	3	7	7	6	31	60
	9·0				1	2	5		3	3	22	36
	Over 9·0				6	4	6	9	8	6	44	83
Total...		5	1	3	13	18	22	24	28	22	163	299

Note:—7 samples of new milk were analysed to ascertain amount of dirt.

Table 13.

Results of analyses of other foods.

	Number of samples			Number of samples	
	Examined.	Adulterated		Examined.	Adulterated
Milk...	300	15	Sugar	0	0
Butter	1	0	Chopped Suet ...	6	0
Cheese	0	0	Confectionery & Jam	0	0
Margarine	0	0	Rice	1	0
Vinegar	5	0	Sausage	6	1
Bread	0	0	Beer	0	0
Flour	1	0	Spirits	6	0
Baking Powder ...	4	0	Drugs	0	0
Coffee	0	0	Other articles ...	0	0
Cocoa	0	0	TOTAL	330	16

Table 14.

Defects discovered in Factories.	1920
Insufficient sanitary accommodation	3
No screens to sanitary conveniences	0
No suitable partitioning of sanitary conveniences	3
No intervening space between closets and machine room ...	1
Limewashing of walls and ceilings required	1
No inside fastens on doors of women's closets	1
Closets insufficiently ventilated	6
No fire escape	0

Table 15.

Defects discovered in workshops.	
Limewashing of walls and ceilings required	3

Table 16.

HOME OFFICE TABLES.

1.—Inspection.

Including inspections made by sanitary inspectors or inspectors of nuisances.

Premises.	Number of		
	Inspections.	Written Notices.	Prosecutions.
Factories ... ... (Including Factory Laundries.)	30	15	—
Workshops ... ... (Including Workshop Laundries.)	252	7	—
Workplaces	6	—	—
Total	288	22	—

Table 17.

2.—Defects found.

Particulars.	Number of Defects.			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
*Nuisances under the Public Health Acts:—**				
Want of cleanliness	1	1	—	—
Want of ventilation	6	6	—	—
Overcrowding	—	—	—	—
Want of drainage of floors	—	—	—	—
Other nuisances	1	1	—	—
Sanitary accommodation. insufficient	3	3	—	—
Sanitary accommodation. unsuitable or defective..	3	3	—	—
Sanitary accommodation. not separate for sexes ..	1	1	—	—
Offences under the Factory & Workshop Acts:				
Illegal occupation of underground bakehouses (s. 101)	—	—	—	—
Breach of special sanitary requirements for bakehouse (ss. 97 to 100). ..	—	—	—	—
Other offences	—	—	—	—
Total	15	15	—	—

---

* Including those specified in sections 2, 3, 7 and 8 of the Factory and Workshop Act, 1901, as remediable under the Public Health Acts.

Table 18.

3.—Home work.

Nature of Work.	OUTWORKERS' LISTS, SECTION 107.			
	Lists received from Employers.			Notices served on Occupiers as to keeping or sending lists.
	Sending twice in the year.			
	Lists	Outworkers		
		Con-tractors.	Work-men	
1	2	3	4	5
Wearing Apparel—				
Making, etc.	4	1	3	—
Cleaning and washing	—	—	—	—
Household linen	—	—	—	—
Lace, lace curtains and nets	—	—	—	—
Curtains and furniture hangings	—	—	—	—
Furniture and upholstery ..	—	—	—	—
Electro-plate	—	—	—	—
File making	1	—	1	—
Brass and brass articles ..	—	—	—	—
Fur pulling	—	—	—	—
Cables and chains ..	—	—	—	—
Anchors and grapnels ..	—	—	—	—
Cart gear	—	—	—	—
Locks, latches and keys ..	—	—	—	—
Umbrellas, etc.	—	—	—	—
Artificial flowers	—	—	—	—
Nets, other than wire nets ..	—	—	—	—
Tents	—	—	—	—
Sacks	—	—	—	—
Racquet and tennis balls	—	—	—	—
Paper, etc., boxes, paper bags	—	—	—	—
Brush making	—	—	—	—
Pea picking	—	—	—	—
Feather sorting	—	—	—	—
Carding, etc. of buttons etc	—	—	—	—
Stuffed toys	—	—	—	
Basket making	—	—	—	—
Chocolates and sweetmeats	—	—	—	—
Cosaques, Christmas crackers, Christmas Stockings etc.	—	—	—	—
Textile weaving	—	—	—	—
TOTAL ..	5	1	4	—

Table 19.

4.—Registered workshops.

	Workshops on the Register (s. 131) at the end of the year. (1)	Number. (2)
Important classes of workshops, such as workshop bakehouses may be enumerated here.	Dressmakers and mantle making	38
	Milliners	17
	Tailors	13
	Hosiery Knitters	7
	Joiners, builders, cabinet-makers and plumbers, etc.	15
	Blacksmiths, wheelwrights, coach builders and masons	10
	Weighing machine repairers	2
	Cloggers and boot repairers	40
	Cycle makers	2
	Cooper	1
	Tripe Dressers	5
	Herbal Brewer	4
	Pearl Ash Manufacturer	1
	Seltzogene, charge maker	1
	Tea wrapping	1
	Drysalter	1
	Leadlight makers	2
	Cab washing	2
	Saddler	1
	Knackers Yard	1
	Sundries	20
	Ice Cream Makers	7
	Total number of Workshops on Register	191

Table 20.

5.—Other matters.

Class. 1		Number. 2
Matters notified to H.M. Inspector of Factories :—		
Failure to affix Abstract of the Factory and Workshop Acts (S. 133, 1901)		—
Action taken in matters re-notified by H.M. Inspector		15
Referred by H.M. Inspectors as remediable under the Public Health Acts, but not under the Factory and Workshops Acts (S. 5, 1901)	Reports of Action taken sent to H.M. Inspector.	15
Other		—
Underground Bakehouses (S. 101) :—		
Certificates granted during the year		—
In use at the end of the year		1

Table 21.

Admissions, discharges, and deaths of St. Helens Patients during 1920.
Peasley Cross Isolation Hospital.

DISEASE.	In hospital Jan. 1st, 1920.		Admitted.		Dis-charged.		Died		In hospital Jan 1st, 1921.	
	M	F	M	F	M	F	M	F	M	F
Typhoid fever ..	—	—	—	—	—	—	—	—	—	—
Scarlet fever....	11	9	203	271	194	253	4	3	16	24
Diphtheria	8	16	61	65	62	74	6	5	1	2
Measles	9	8	45	50	47	53	7	5	—	—
Other diseases ..	7	9	96	117	81	110	19	11	3	5
Mothers with sick babies ..	—	—	—	18	—	18	—	—	—	—
Babies with sick mothers ..	—	—	6	7	6	5	—	—	—	2
	35	42	411	528	390	513	36	24	20	33
	77		939		903		60		53	
Venereal diseases	3		26		27		1		1	
Total	80		965		930		61		54	

Table 22.

Admissions, discharges, and deaths of Haydock patients during 1920
Peasley Cross Isolation Hospital.

DISEASE.	In hospital Jan. 1st, 1920		Admitted.		Discharged		Died.		In hospital Jan. 1st, 1921,	
	M	F	M	F	M	F	M	F	M	F
Scarlet fever....	1	4	4	14	4	17	—	—	1	1
Diphtheria	—	—	1	3	1	3	—	—	—	—
Enteric fever ...	—	—	1	2	1	2	—	—	—	—
Erysiplas ..	—	—	—	1	—	1	—	—	—	—
	1	4	6	20	6	23	—	—	1	1
Total ..	5		26		29		—		2	

Table 23.

Percentage of cases of infectious diseases removed to hospital.

	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
Scarlet fever .	82·8	87·1	98·4	96·6	97.07	92·4	99·5	97·0
Diphtheria	70·9	88·3	93·0	92·7	96.4	92·9	100·0	98·4
Enteric fever .	100·0	92·5	100·0	100·0	100.0	71·4	100·0	—
Puerperal fever	50·0	64·7	100·0	60·0	100.0	62·5	88·2	92·3
Erysipelas	4·0	1·8	5·4	1·2	4·01	1·4	4·1	28·3
Phthisis	34·3	55·5	67·6	75·0	92·6	89.5	81·4	59·7
Ophthalmia	0·0	11.5	12·6	11·5	33.33	42·5	34·2	50·7

Table 24.

General Summary of Cases in Old Whint Maternity Hospital, 1920.

Number of cases admitted.		Average Duration of stay in days.	Number delivered by Doctor.	Number delivered by Midwives.	Number notified as Puerperal Sėpsis.	Number in which Temperature rose above 100.4.	Number notified as Ophthalmia Neonatorum	Number of cases of Inflamation of Eyes.	Number of children not entirely breast fed in Institution with reasons.					Number of Maternal Deaths with causes.		Number of Foetal Deaths with causes.		
Ante Natal	Post Natal								Absence of Mother's milk.	Congenital. Syphilis.	Tuberculosis in Mother.	Prematurity.	Death of Mother.	Puerperal Eclampsia.	Acute Lobar Pnemonia.	Congenital Syphilis.	Congenital Malformation.	Prematurity.
96	38								2	2	1	1	1	1	1	2	1	1
134		34	18	66	Nil.	5	Nil.	2	7					2		4		

Table 25.

Old Whint Maternity Hospital.

Table showing number of cases in which medical assistance was sought by the midwife during 1920 with reasons for requiring assistance.

ANTE NATAL.				DURING LABOUR.				*AFTER LABOUR.								FOR INFANT.			
Albuminuria.	Debility.	Hyperemesis Grairdarum.	Varicose Veins.	Eclampsia.	Placenta Praevia.	Adherent Placenta.	Protracted Labour.	Lacerated Perinaeum.	Rise of Temperature.	Post Partem Hæmorrhage.	Mastitis.	Debility.	Epilepsy.	Pnuemonia.	Albuminuria.	Inflamation of Eyes.	Congenital Syphilis.	Malnutrition.	Prematurity.
3	4	1	2	1	1	1	15	7	6	4	2	6	1	1	3	2	2	2	4
10				18				30								10			

*Includes cases admitted to hospital after labour.

Table 26.

General Summary of Cases in Hospital for Children at Old Whint.

NUMBER OF ADMISSIONS		AVERAGE DURATION OF STAY IN DAYS.	NO. OF CASES DISCHARGED.				NO. OF CASES OF INFECTIOUS DISEASE.			
Admitted.	Born in Hospital.		No Improvement.	Improved.	In Good Health.	Discharged on Account of Illness.	Measles.	Whooping Cough.	Epidemic Diarrhœa.	Other Infections.
133	82									
215		24	5	21	156	1	Nil.	Nil.	Nil.	Nil.

*One case of Surgical Tuberculosis transferred to Childrens' Hospital, Leasowe.

Table 27.

Table showing reason of admission with numbers of cases under each heading.

Marasmus, Malnutrition, Rickets..	35	Cretinism	1
Child healthy with Sick Mother, etc.	35	Mongolism	1
Skin Diseases, Abscesses, etc.	18	Congenital Syphilis	4
Bronchitis and Broncho-Pnuemonia	9	Intussusception	1
Tuberculosis of Bones	3	Imperforate Anus	1
Tubercular Mesenteric Glands	1	Prematurity	4
Infantile Paralysis	2	Miscellaneous	7
Chorea	1	Born in Hospital	82
Meningitis	4		
Nephritis	5	Total	215
Hydrocephalus	1		

Table 28.

Table showing deaths of children with dates, causes and period of residence in hospital.

DATE.	CAUSE OF DEATH.	PERIOD OF RESIDENCE IN DAYS.
22—1—20	Congenital Syphilis	6
14—2—20	Marasmus	7
5—3—20	Meningitis.............	2
14—3—20	Marasmus	29
16—3—20	Marasmus	56
16—3—20	Marasmus	56
7—5—20	Imperforate Anus	115
29—5—20	Meningitis.............	57
12—6—20	Tubercular Meningitis ..	22
13—6—20	Congenital Syphilis	13
26—6—20	Broncho Pneumonia....	6
26—6—20	Broncho Pneumonia ...	10
4—7—20	Prematurity	1
5—7—20	Prematurity	2
20—7—20	Marasmus	26
21—8—20	Meningitis.............	46
19—9—20	Marasmus	13
28-10—20	Marasmus	21
	Total Deaths 18	

Table 29.

Showing attendances at Maternity and Child Welfare Centres during 1920.

MATERNITY AND INFANT WELFARE CENTRES		First visits	Subsequent visits
Number of expectant mothers attending the centres		261	190
Number of mothers attending the centres		2,401	2176
Number of children attending the centres		2,472	2391
Number of attendances of	expectant mothers	1,107	
	mothers....................	23,292	
	children....................	23,625	
	Total Attendance..........	48,024	

Table 30.—Venereal Disease.

Annual return relating to persons residing in the County Borough of St. Helens who were treated at the Treatment Centre at Claughton Street during the year ending on the 31st December, 1920.

		Males	Females
1	Number of persons dealt with at or in connection with the out-patient Clinic for the first time and found to be :—		
	Suffering from syphilis	46	34
	,, ,, soft chancre	5	5
	,, ,, gonorrhœa	78	9
	Not suffering from venereal disease	20	4
	TOTAL ..	149	52
2	Number of persons discharged from the out-patient Clinic after completion of treatment for :—		
	Syphilis	16	15
	Soft chancre	16	5
	Gonorrhœa	52	—
	TOTAL ..	84	20
3	Number of persons who ceased to attend the out-patient Clinic without completing treatment and who were suffering from :—		
	Syphilis	11	12
	Soft chancre	2	—
	Gonorrhœa	14	4
	TOTAL ..	27	16
4	Total attendances of all persons at the out-patient Clinic who were :—		
	Suffering from syphilis	1208	563
	,, ,, soft chancre	102	71
	,, ,, gonorrhœa	1212	84
	Not found to be suffering from venereal disease..	104	36
	TOTAL ..	2626	754
5	Aggregate number of " In-patient days " of treatment given to persons suffering from venereal disease	403	446

	IN-PATIENTS	
7	Number of doses of Salvarsan substitutes given :—	
	Galyl	Doses.
	to (1) St. Helens patients	170
	(2) Lancashire County patients	—
	(3) Others	12
	OUT-PATIENTS	
	Galyl	
	to (1) St. Helens patients	1210
	(2) Lancashire County patients	37
	(3) Liverpool	10
8.	Examinations of Pathological material :—	
	(*a*) Specimens from persons attending at the Treatment Centre which were examined at this Centre :—	
	For detection of spirochetes	None.
	,, ,, ,, gonococci	
	,, Wassermann reaction	
	Others	
	(*b*) Specimens from persons attending at the Treatment Centre which were sent for examination to an independent laboratory :—	
	For detection of spirochetes	—
	,, ,, ,, gonococci	164
	,, Wassermann reaction	399
	Others	5

Table 31.

Amount of clothing, etc., disinfected during 1920.

Hospital clothing and bedding	6,820
Blankets, sheets, and rugs	3,600
Pillows and cushions	3,030
Beds	1,200
Other articles of clothing	7,850
Library books	103
Other articles	2,650
Articles of clothing for soldiers	75
Total	25,328

Table 32.

Investigations carried out in the municipal laboratory.

Specimens.	Number received	Results.	
		Positive	Negative
Diphtheria—swab	2782	106	2676
Typhoid fever—blood	10	—	10
Tuberculosis—sputum	231	46	185
Ringworm—hair	57	35	22
Other specimens	63	21	42
Total	3143	208	2935

Table 33.

Vaccination returns since 1897.

YEAR.	2 Vaccinated.	3 Insusceptible.	4 Dead.	5 Con-Obje't'r	6 Postponed.	7 Removed	8 Unaccounted	Percentage not Vaccinated including Columns 5, 6, 7, 8
*1897	2,680	11	390	4	7	110	7	4·9
*1898	2,696	15	383	14	1	103	15	4·6
*1899	2,625	32	346	10	3	94	16	4·8
*1900	2,654	10	367	5	12	82	18	4·2
1901	2,639	4	391	11	29	59	24	4·4
1902	2,788	4	342	7	12	58	34	3·8
1903	2,977	8	325	2	6	62	11	2·6
1904	2,940	7	341	10	10	42	25	2·8
1905	2,923	3	270	6	10	29	18	2·1
1906	2,733	5	318	8	12	39	22	2·8
1907	2,810	9	257	24	19	49	17	3·7
1908	2,858	18	248	70	11	35	20	4·5
1909	2,720	8	241	81	9	33	11	4·7
1910	2,731	3	255	131	3	23	19	6·0
1911	2,750	9	277	148	5	26	14	6·5
1912	2,646	4	249	216	12	23	4	8·7
1913	2,499	6	296	339	14	27	9	13·0
1914	2,654	11	281	348	6	22	24	13.0
1915	2,352	2	189	367	9	34	15	15.3
1916	2,056	4	186	287	3	39	24	14.6
1917	1,702	4	158	267	1	6	45	15.7
1918	1,861	0	201	281	8	40	19	14·5
1919	1,999	2	189	385	4	25	18	17·8

*The above Returns are for St. Helens Sub-District of the Prescot Union, which does not include quite the whole of the Borough.

Table 34.

Classification according to age of the cases of and deaths from diphtheria.

Ages.	Under 1 year	1—5	5—15	15—25	25—45	45—65	65 & over.
Cases	2	34	66	15	10	1	0
Deaths......	1	7	5	0	0	0	0

Table 35.

Classification according to age of the cases of and deaths from scarlet fever.

Ages.	Under 1 year.	1—5	5—15	15—25	25—45	45—65	65 & over.
Cases	9	93	323	43	6	—	—
Deaths	—	2	4	1	—	—	—

Population from

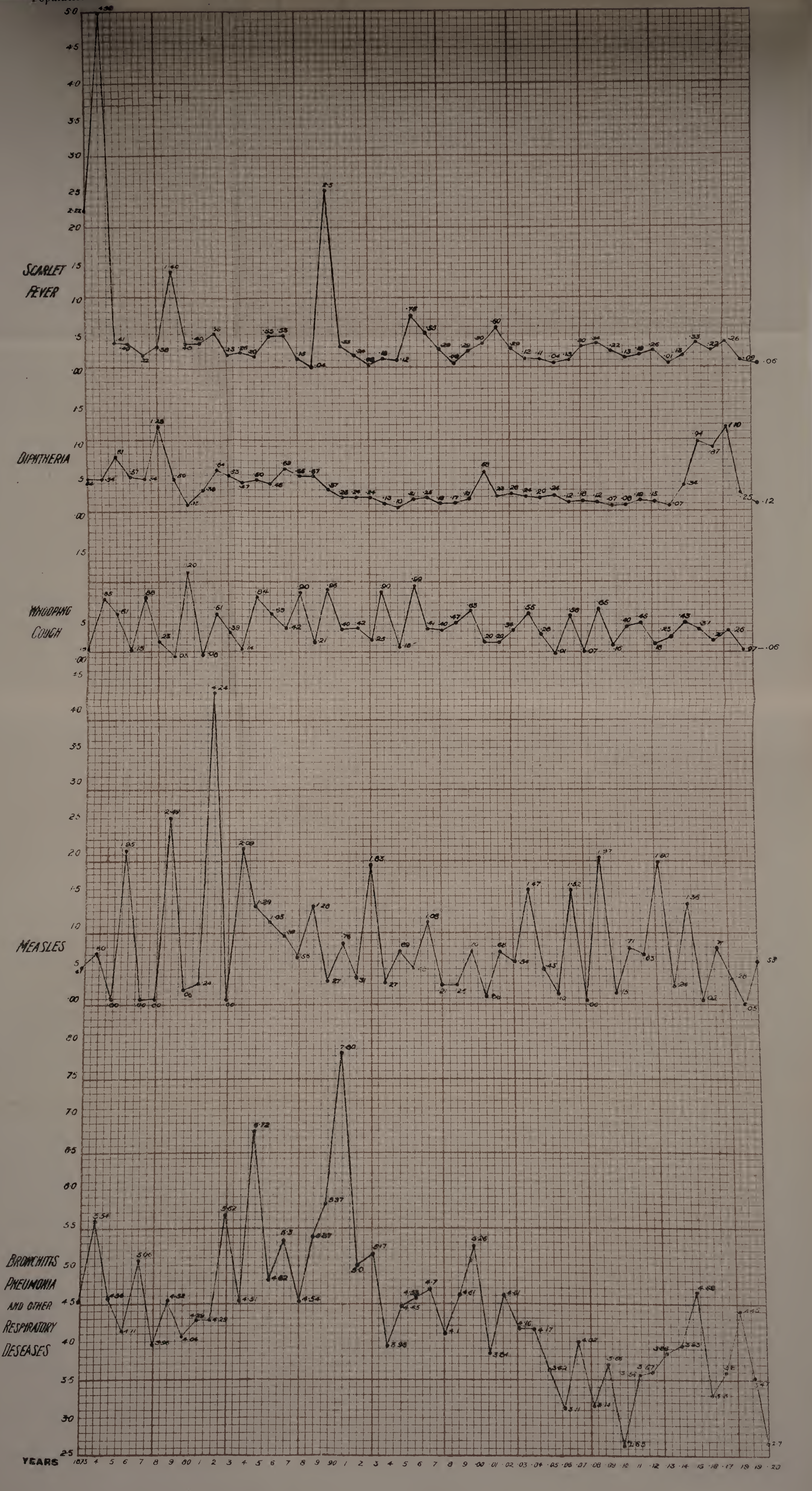


Table 37.

Classification according to age of deaths from measles.

Ages.	Under 1 year.	1—2	2—5	5—15	15—25	25 and over.
Deaths	14	19	17	6	—	—
Death-rate per 1,000 of the population at these ages	5·3	7·5	2·2	0·2	—	—

Table 38.

Classification according to age of the deaths from diarrhœa and enteritis.

Ages.	Under 1 year	1–2	2–5	5–15	15–25	25–45	45–65	65 and upw'ds
Deaths....	32	4	1	2	1	0	2	2

Table 39.

Classification according to age of the cases of pulmonary tuberculosis.

	0–1	1–5	5–15	15–25	25–35	35–45	45–55	55–65	Over 65	Total.
Males	—	3	30	10	26	36	13	7	2	127
Females ..	—	—	25	22	27	9	8	2	1	94
Totals ...	—	3	55	32	53	45	21	9	3	221

Table 40.

Classification according to age of the cases of non-pulmonary tuberculosis.

Ages	Under 1 year	1–5	5–15	15–25	25–35	35–45	45–55	55–65	Over 65	Total
Males	6	7	16	—	5	—	—	—	1	35
Females	2	7	10	7	3	1	—	—	—	30
Total	8	14	26	7	8	1	—	—	1	65

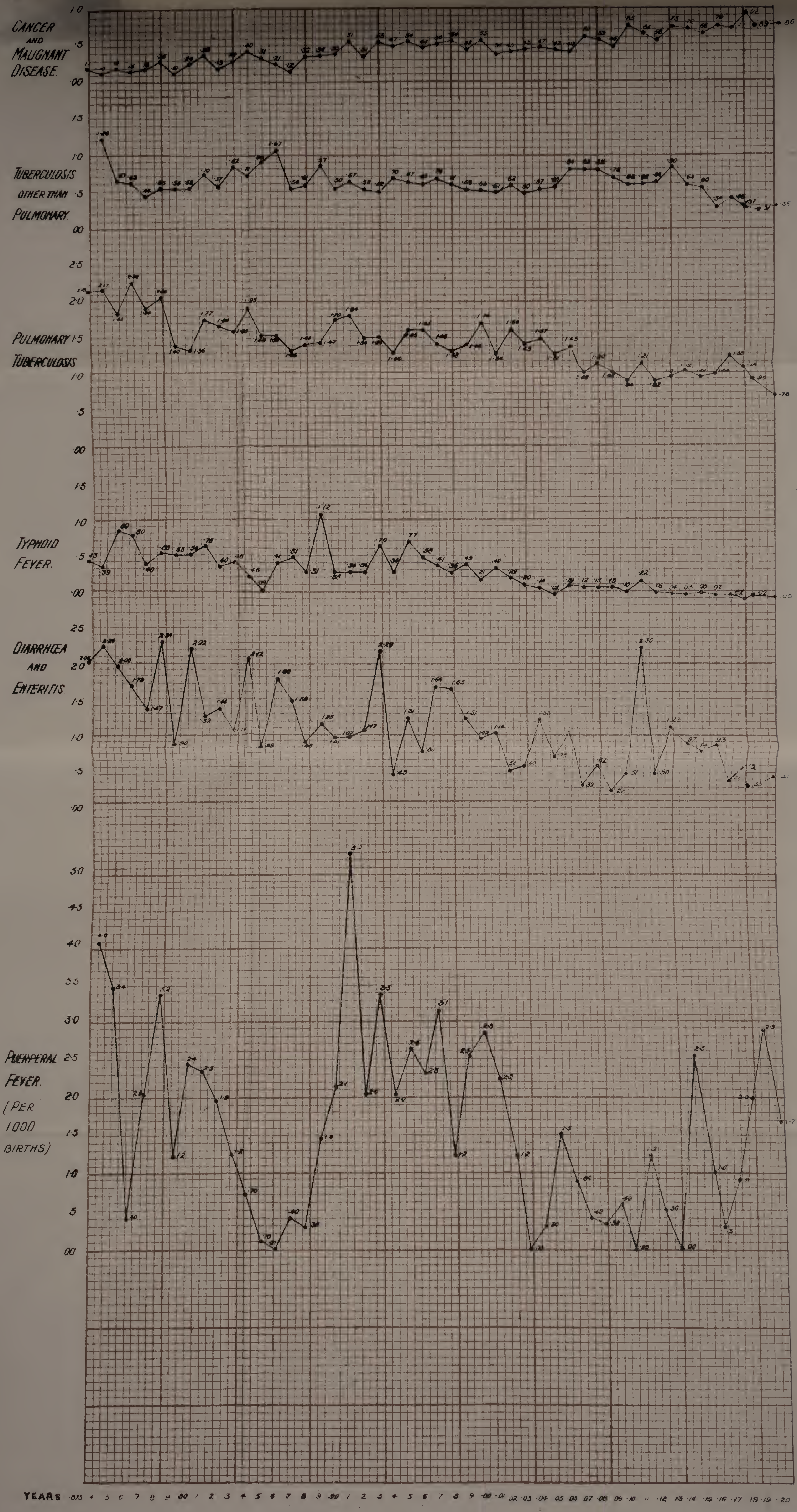
Table 42.

The admissions and discharges at Eccleston Hall.

	Remaining in on Dec. 31st, 1919.		Admitted during 1920.		Discharged during 1920.		Died during 1920.		Left without permission.		Dismissed for unsatisfactory behaviour.		Remaining in on Dec. 31st, 1920.	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
A (Early cases). ...	1 —	2 1c	22 1c	26 4c	12 1c	16 3c	— —	— —	2 —	1 —	1 —	— —	8 —	11 2c
B. (Intermediate cases).	13 2c	6 2c	24 2c	10 3c	20 1c	13 2c	4 2c	1 —	1 —	— —	3 —	— —	9 1c	2 3c
C. (Late cases)	13 2c	5 4c	21 7c	22 9c	15 3c	9 5c	14 4c	9 5c	1c	1 —	— —	— —	5 1c	8 3c
D. (Observation cases).	8 —	5 —	3 1c	3 —	8 1c	5 —	1 —	1 —	— —	— —	— —	— —	2 —	2 —
E.	—	—	—	1	—	1	—	—	—	—	—	—	—	—
TOTALS	35 4c	18 7c	70 11c	62 16c	55 6c	44 10c	19 6c	11 5c	3 1c	2 —	4 —	— —	24 2c	23 8c

c Patients sent by Lancashire County Council.

Population from



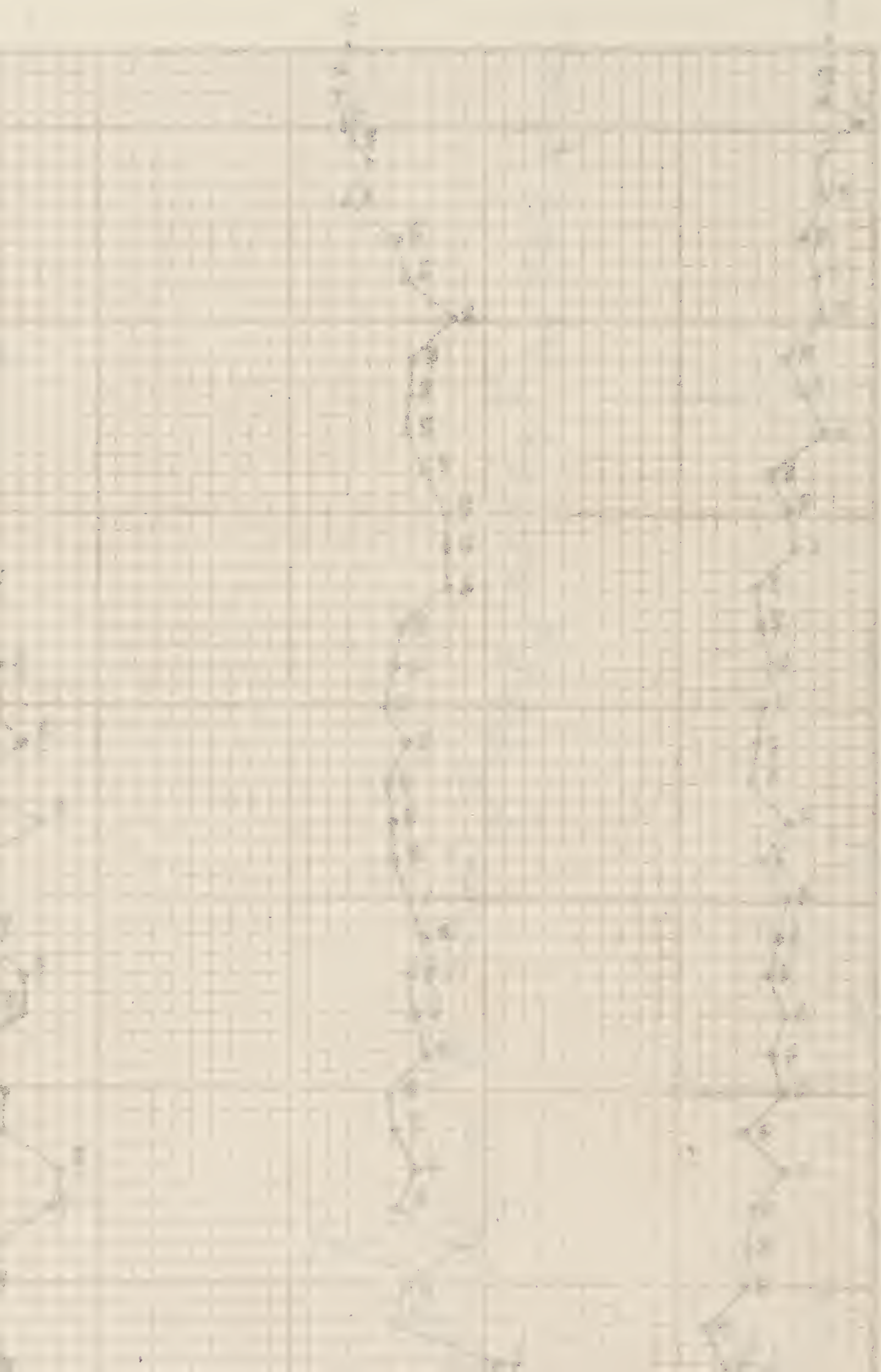


Table 43.

Age and sex classification of new cases of tuberculosis attending the dispensary.

	Pulmonary.		Other Forms.		Suspicious cases.		Totals.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1— 5....	1	—	1	1	—	—	2	1
5—15....	15	21	1	3	13	9	29	33
15—25....	6	6	—	1	8	10	14	17
25—35....	15	9	1	—	32	16	48	25
35—45....	12	4	1	—	18	6	31	10
45—55....	3	3	1	—	7	3	11	6
55—65....	—	1	—	—	3	2	3	3
65 upwards	—	—	—	—	1	—	1	—
Totals	52	44	5	5	82	46	139	95

Table 44.

Number of attendances at the tuberculosis dispensary during 1920.

	Pulmonary.	Other forms	Suspicious cases.
Number of old cases attending on 31st Dec., 1919	132	55	53
Number of new cases during the year 1920 ...	96	10	128
Number of attendances during the year	3090	507	821

Table 45.

Statistics for St. Helens since 1873.

YEARS	Population.	Birth Rate.	Death Rate.	Zymotic Death Rate.	Infantile Mortality Rate.	Rate of Persons Married.	DEATHS FROM Small Pox.	Measles.	Scarlet Fever	Typhoid Fever.	Typhus Fever.	Diarrhœa.	Whooping Cough.	Diphtheria.
1873	45,500	46·6	23·6	2·75	148	—	4	19	99	20	0	94	9	25
1874	46,188	46.3	31.4	5.03	198	—	0	29	238	19	0	110	41	26
1875	48,668	45.4	24.6	2.51	138	—	0	4	21	45	0	101	31	41
1876	52,246	45.6	23.2	3.20	149	—	0	101	21	42	0	94	7	30
1877	54,463	44.3	22.8	2.09	150	—	0	2	12	22	0	77	48	31
1878	57,534	43.2	23.9	3.09	165	—	0	4	22	35	0	135	15	74
1879	57,522	41.1	22.4	5.51	136	—	0	143	82	31	0	52	2	29
1880	58,807	41.6	20.0	2.92	169	—	0	0	27	32	0	131	71	8
1881	57,575	43.5	21.6	2.03	128	—	0	14	27	45	0	76	3	2
1882	58,903	43.7	25.4	4.95	180	—	0	205	35	24	0	85	36	38
1883	60,263	40.69	21.65	2.5	143	—	0	3	14	31	0	69	24	11
1884	61,584	42.50	24.16	5.3	173	—	0	131	16	33	2	131	9	11
1885	62,932	39.93	23.32	3.5	168	—	0	81	13	7	1	56	53	11
1886	64,311	40.70	22.46	5.2	172	—	0	102	34	28	0	122	41	10
1887	65,718	37.00	21.69	3.9	163	—	0	53	35	34	0	101	28	11
1888	67,158	39.20	19.80	3.1	151	—	0	38	11	22	0	65	61	21
1889	68,628	39.86	23.50	4.18	177	—	0	78	3	81	1	85	15	29
1890	70,132	38.90	25.43	5.3	170	—	0	19	181	24	1	74	68	13
1891	71,509	40.80	26.02	3.0	180	—	0	54	24	26	0	78	29	9
1892	72,399	40.2	21.0	2.64	147	—	1	23	18	25	0	84	31	12
1893	73,576	41.3	24.4	5.4	196	—	5	135	6	52	0	168	19	16
1894	*76,112	37.8	18.3	2.21	161	14.6	0	21	14	26	2	38	61	10
1895	77,288	40.9	21.8	3.10	181	13.0	1	54	9	59	0	101	14	8
1896	78,482	38.7	20.9	3.73	177	13.2	0	38	59	40	0	63	78	17
1897	79,694	40.0	21.8	4.3	181	14.2	0	87	44	33	0	133	33	20
1898	80,926	40.3	19.9	3.2	172	14.2	0	17	24	30	0	140	34	16
1899	82,176	38.3	20.4	2.9	157	13.0	0	21	8	43	0	114	41	15
1900	83,445	37.1	22.8	3.2	188	13.0	0	59	25	19	0	91	56	19
1901	84,734	36.9	19.7	2.56	175	13.9	0	7	29	34	0	95	17	3
1902	86,043	37.4	19.7	2.60	167	11.4	0	59	52	25	0	50	18	20
1903	87,372	39.1	17.5	1.72	138	13.0	0	1	26	18	0	53	30	23
1904	88,722	37.4	20.9	3.96	174	12.9	3	131	17	13	0	120	49	22
1905	89,843	36.05	17.2	1.88	132	11.7	0	41	16	2	0	66	26	18
1906	91,153	33.9	17.3	1.79	159	11.9	0	10	4	18	0	105	5	22
1907	92,476	34.1	18.3	2.87	155	13.6	0	145	10	12	0	36	52	11
1908	93,812	35.2	16.0	1.32	122	12.3	0	0	29	12	0	59	7	17
1909	95,161	32.0	18.5	3.5	149	12.7	0	188	33	13	0	27	62	12
1910	96,523	32.7	14.5	1.26	121	13.1	1	15	22	10	0	51	16	7
1911	96,870	33.5	18.3	3.03	158	12.7	0	69	13	22	0	143	39	8
1912	98,159	31.9	15.5	1.76	124	14.0	0	62	19	8	0	49	46	19
1913	99,460	32.1	18.9	3.74	155	14.6	0	189	26	4	0	120	18	15
1914	100,775	33.3	17.0	1.62	138	14.1	0	25	5	4	0	98	24	8
1915†	92,240	32.1	19.3	3.1	129	16.1	0	126	12	6	0	78	40	32
1916†	90,000	26.5	16.8	1.95	108	14.9	0	2	30	2	0	64	34	85
1917†	90,600	22.0	16.53	2.26	123	10·60	0	65	20	2	0	37	19	79
1918†	90,600	24.1	21·2	2.45	126	11.4	0	26	24	0	0	48	24	100
1919†	100,805	25·5	15·0	0·82	117	17·5	0	5	9	2	0	35	7	25
1920	104,822	31·8	13·5	1.2	113	16·8	0	56	7	0	0	44	7	13

†Estimated civil population *Borough extended

Table 46.

INFANTILE MORTALITY RATE - ST HELENS AND ENGLAND AND WALES - 1873-1920

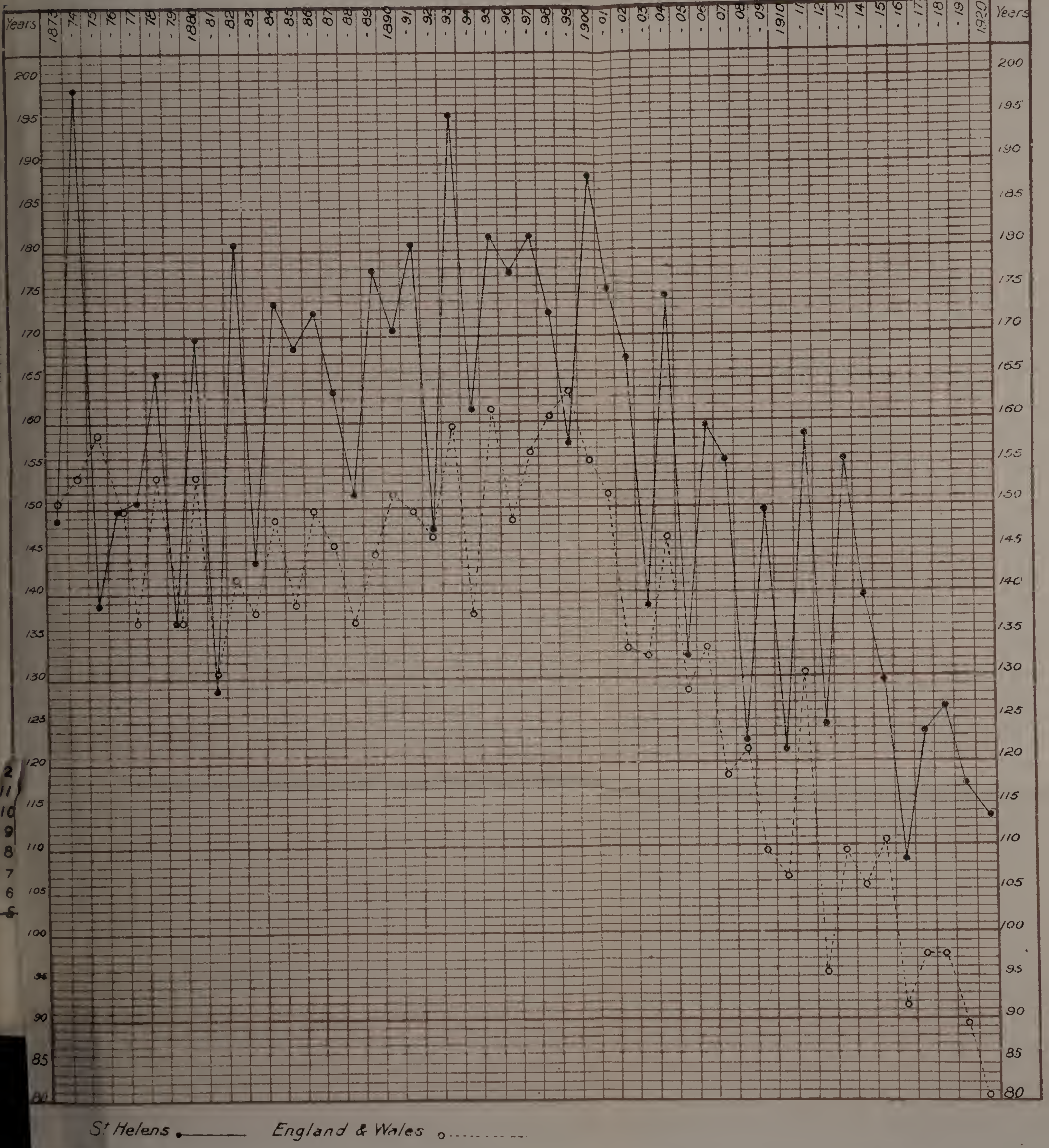
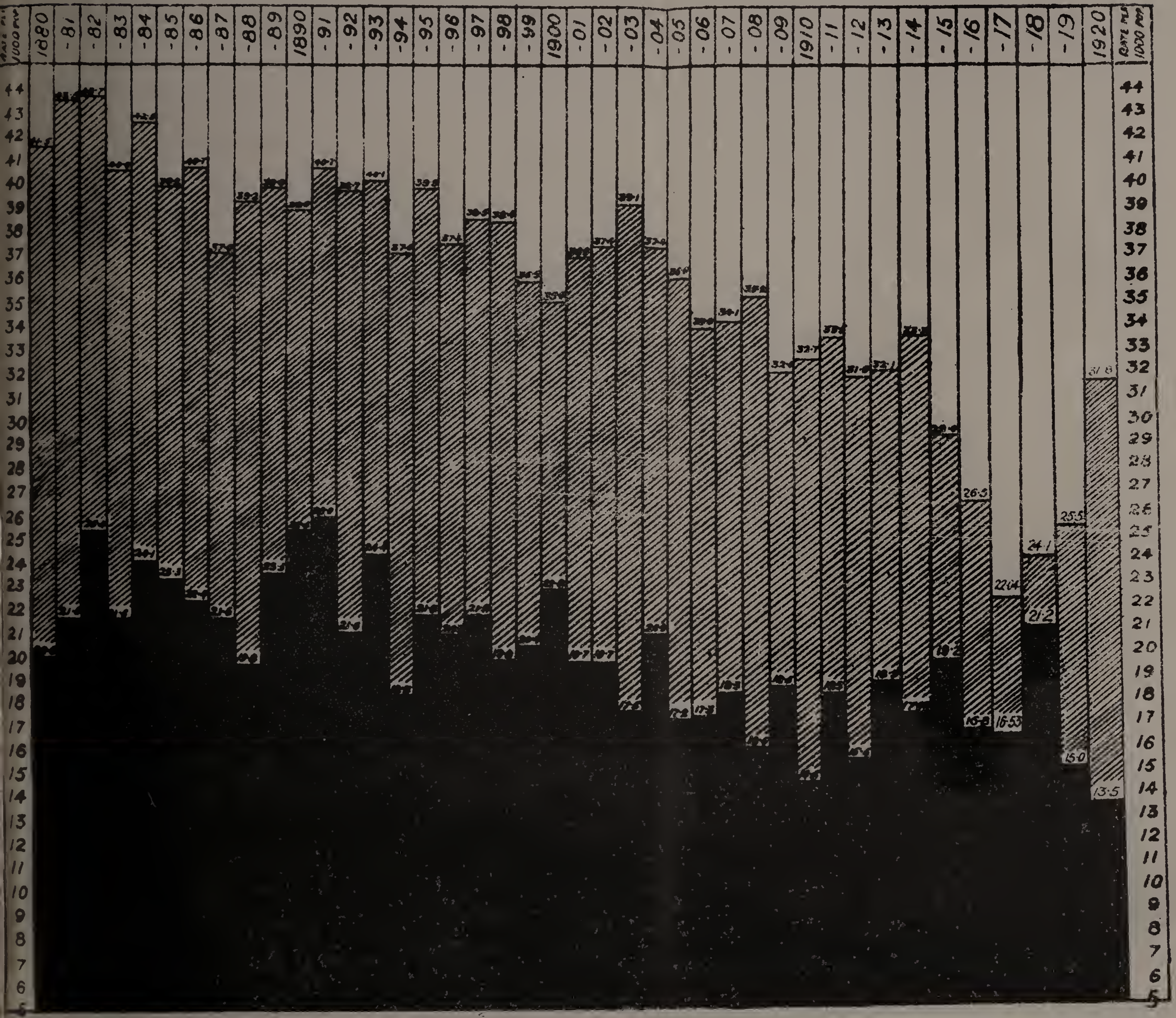


Table 47.

BIRTH RATE, DEATH RATE AND RATE OF NATURAL INCREASE. ST HELENS 1880 - 1920.



The Black portion represents the DEATH RATE.

The Shaded portion represents the RATE OF NATURAL INCREASE, or the excess of the Birth Rate over the Death Rate.

The BIRTH RATE is represented by the shaded portion PLUS the black portion.

The death rates are not corrected for age & sex distribution.

Table 48.

BIRTH RATE – St HELENS, 1873 – 1920.

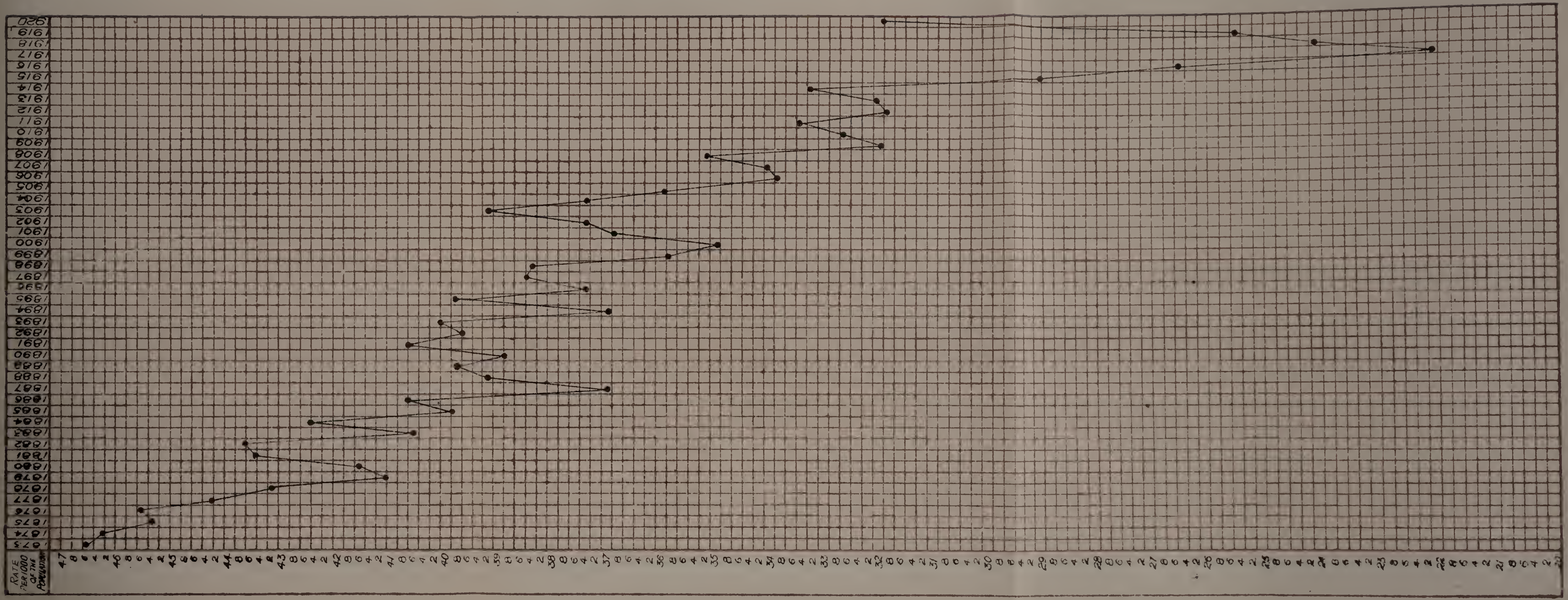


Table 49.

Birth-rates in the various wards.

WARDS.	Number of births notified.	Birth-rate per 1,000 estimated total pop'lation
North Eccleston	441	33·1
South Eccleston.	433	33·6
Central	211	30·6
North Windle	383	28·9
South Windle	257	28·5
Hardshaw	316	25·2
East Sutton	355	28·2
West Sutton	381	34·0
Parr	503	37·9

Table 50.

Number of illegitimate births.

ears.......	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
umber of llegitimate births	76	76	68	70	87	80	84	71	108	84	96	97	92	78	78	112	127	131
oportion per 1,000 population	0·86	0·85	0·75	0·76	0·94	0·85	0·88	0·73	1·11	0·85	0·96	0·96	0·90	0·79	0.79	1·1	1·2	1·2

Table 51.

Number of marriages.

......	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
er of iages..	576	529	544	632	579	608	637	617	691	730	706	745	568	536	579	924	882
ge rate 1,000 ation..	12·98	11·76	11·93	13·6	12·3	12·7	13·1	12·7	14·09	14·6	14·01	14·5	11·58	10.60	11·4	17·5	16·8

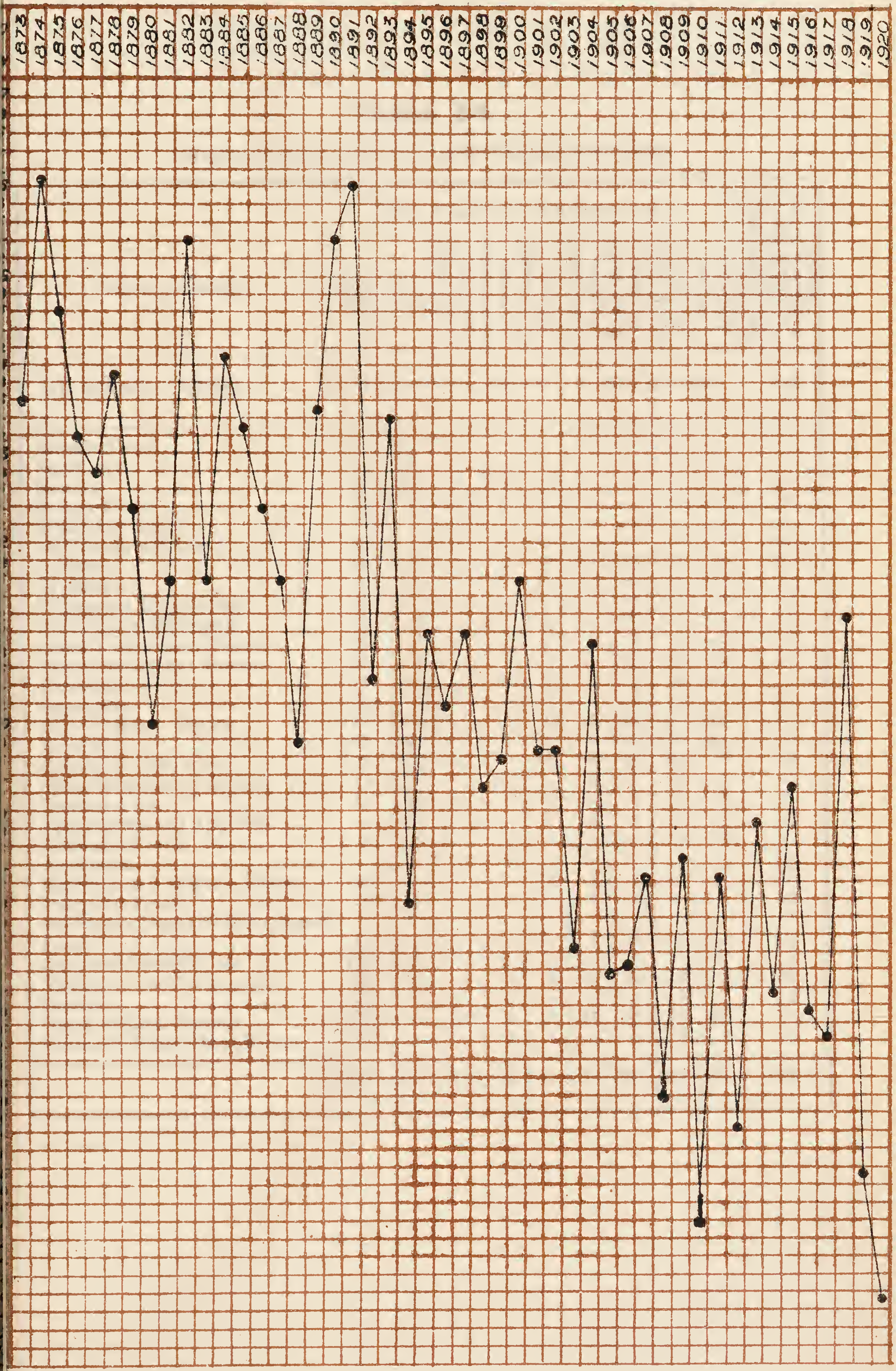
Table 52.

Death rates in the various wards.

WARDS.	Number of deaths	Death rate per 1000
North Eccleston	186	13.9
South Eccleston	150	11.6
Central	135	19.6
North Windle	140	10.6
South Windle	101	11.2
Hardshaw	180	14.3
East Sutton	149	11.8
West Sutton	148	13.2
Parr	230	17·3

Table 53.

DEATH RATE - ST HELENS, 1873-1920.



The death rate is not corrected for age & sex distribution.

Table 54.

Causes of, and ages at, death during year 1920.

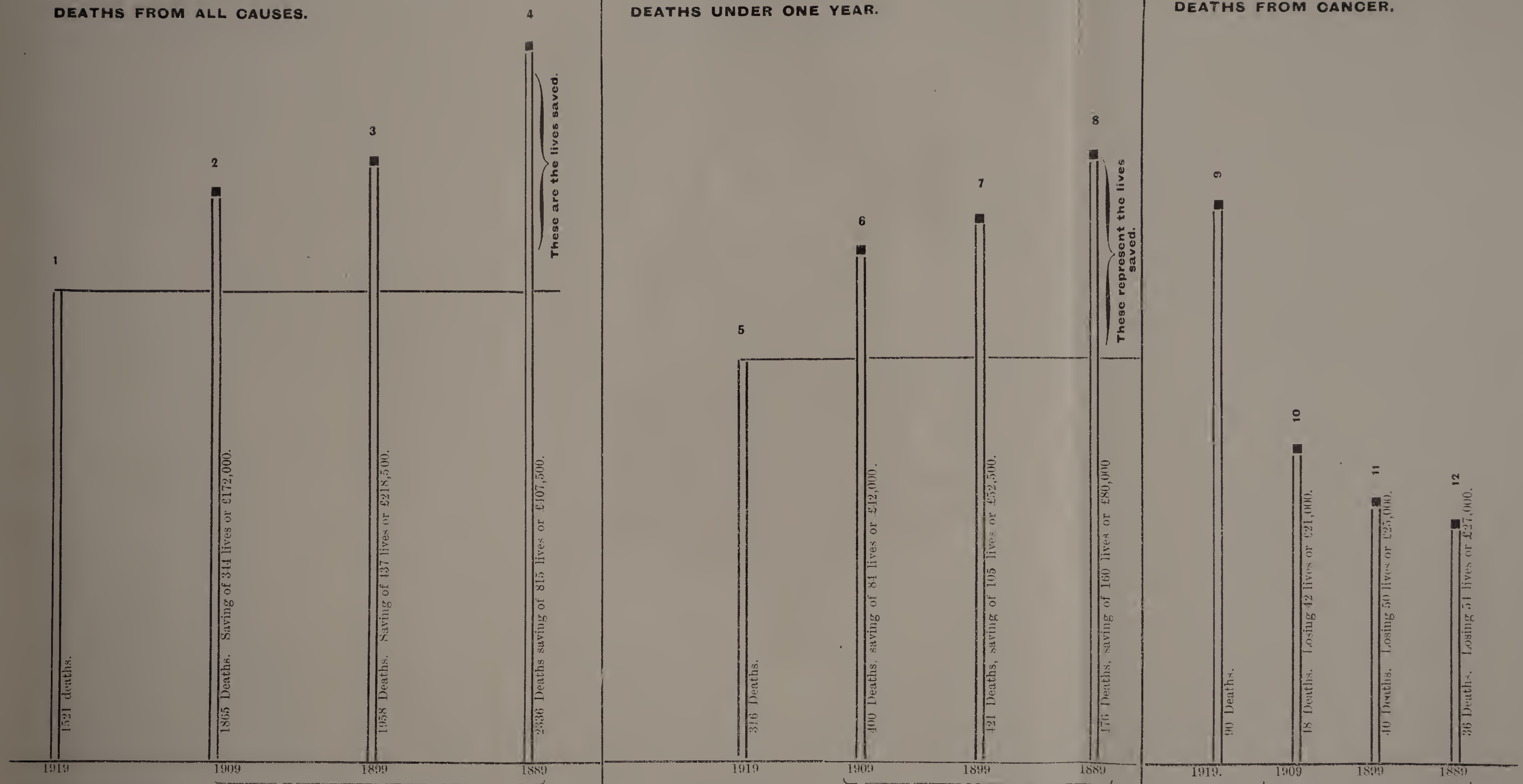
CAUSES OF DEATH.	NETT DEATHS AT SUBJOINED AGES.									Total Deaths whether of "Residents" or "Non-Residents" in Institutions in the District.
	All Ages.	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 45 years.	45 and under 65 years.	65 and upwards.	
All causes—Certified	1,419	378	81	62	77	71	201	308	241	293
Enteric Fever	—	—	—	—	—	—	—	—	—	—
Small-pox	—	—	—	—	—	—	—	—	—	—
Measles	56	14	19	17	6	—	—	—	—	10
Scarlet Fever	7	1	—	1	4	1	—	—	—	5
Whooping Cough	7	4	2	1	—	—	—	—	—	1
Diphtheria and Croup	13	1	1	6	5	—	—	—	—	12
Influenza	49	5	1	2	1	9	13	12	6	13
Erysipelas	1	1	—	—	—	—	—	—	—	1
Pulmonary Tuberculosis	82	—	—	—	4	18	37	21	2	17
Tuberculous Meningitis	16	8	2	1	3	—	2	—	—	2
Other Tuberculous Diseases	21	1	2	6	4	4	3	1	—	2
Cancer, malignant disease	91	1	—	—	—	—	12	55	23	11
Rheumatic Fever	11	—	—	1	2	3	3	2	—	1
Meningitis	22	7	5	5	4	—	1	—	—	11
Organic Heart Disease	113	—	—	1	2	2	25	49	34	11
Bronchitis	127	32	7	1	—	—	11	31	45	9
Pneumonia (all forms)	148	49	24	7	14	4	16	25	9	40
Other Respiratory diseases	13	3	—	1	—	1	2	2	4	2
Diarrhœa, etc,	44	32	4	1	2	1	—	2	2	1
Appendicitis and Typhlitis	4	—	—	—	1	2	1	—	—	3
Cirrhosis of Liver	2	—	—	—	—	—	—	—	2	—
Alcoholism	1	—	—	—	—	—	—	1	—	—
Nephritis and Bright's Disease	30	1	—	1	1	1	6	14	6	17
Puerperal Fever	6	—	—	—	—	2	4	—	—	3
Parturition, apart from Puerperal Fever	11	—	—	—	—	1	10	—	—	1
Congenital debility, etc.	140	138	1	—	1	—	—	—	—	7
Violence, apart from suicide	62	3	3	5	8	11	16	12	4	21
Suicide	11	—	—	—	—	—	6	4	1	2
Other Defined Diseases	322	77	10	3	14	10	32	74	102	89
Causes ill-defined or unknown	9	—	—	2	1	1	1	3	1	1
	1419	378	81	62	77	71	201	308	241	293

Table 56.

Account of magisterial proceedings taken during 1920.

Date.	Magisterial Proceedings.	Result.
March 15th ..	Sale of milk deficient in fat to the extent of 14%	Dismissed on payment of costs.
April 12th ..	Sale of milk deficient in fat to the extent of 4%	Dismissed on payment of costs.
April 12th ..	Selling milk containing 12 grains cow dung	Fined £2 and costs.
April 12th ..	Sale of milk deficient in fat to the extent of 3%	Dismissed on payment of costs.
Sept. 17th ..	Selling milk containing 17 grains per gallon of dirt	Fined £1 and costs.
Sept. 24th ..	Sale of milk deficient in fat to the extent of 8%	Case withdrawn.
Sept. 3rd ..	Contravention of Section 2 (a) of the St. Helens Closing Order, 1915, made under Section 5 of the Shops Act.	Dismissed on payment of costs.
Oct. 25th (1)	Permitting materials used in the manufacture of ice cream to be stored in a room which was in a condition likely to render such commodity injurious to health, contrary to Section 80, St. Helens Corporation Act, 1911........	Fined £1 and costs.
(2)	Permitting materials used in the manufacture of ice cream to be stored in a sleeping room......................	Fined £1 and costs.
(3)	Permitting ice cream to be manufactured in a place which was in a condition likely to render such commodity injurious to health	Withdrawn.
Oct. 25th ..	Offences 1, 2, and 3 as given above ..	Fines as shown above.
Oct. 25th ..	Contravention of Section 4, Shops Act, 1912...............................	Fined 5/-.
Oct. 25th ..	Ditto.	Fined 5/-.
Oct. 25th ..	Ditto.	Fined 5/-.
Oct. 25th ..	Ditto.	Fined 5/-.
Nov. 22nd ..	Sale of milk containing 13% of added water	Fined £1 and costs.

Table 55.



This column represents the number of persons who died in St. Helens, 1919.

These columns represent the number of persons who would have died in 1919, had the death rate been the same as it was in the above mentioned years.

This column represents the number of babies under 1 year who died in St. Helens, 1919.

These columns represent the number of babies under 1 year who would have died in 1919 had the death rate been the same as it was in the above mentioned years.

This column represents the number of persons who died in St. Helens from Cancer, 1919.

These columns represent the number of persons in St. Helens who would have died from Cancer in 1919, had the death rate been the same as that in the above mentioned years.

Table 57.

The wards of the borough in which dwelling houses have been erected during the years mentioned.

Year.	North Eccleston	South Eccleston	Central	North Windle	South Windle	Hardshaw	East Sutton	West Sutton	Parr	Total
1904	105	53	7	37	18	47	59	1	70	395
1905	19	93	1	44	16	90	42	10	54	366
1906	11	51	—	31	13	31	73	24	39	260
1907	22	38	—	26	—	22	77	3	29	219
1908	2	52	—	4	2	27	22	—	20	127
1909	—	36	—	10	—	10	6	3	10	75
1910	2	31	—	10	—	24	18	—	25	110
1911	14	20	--	—	—	30	75	26	12	177
1912	35	28	—	4	—	26	28	58	1	180
1913	10	31	—	—	3	19	14	99	6	182
1914	10	42	—	9	16	14	20	63	29	203
1915	6	9	—	26	1	2	8	25	27	104
1916	0	12	—	1	1	2	4	16	16	52
1917	—	—	—	—	—	—	—	9	—	9
1918	—	—	—	—	—	—	—	3	—	3
1919	—	1	3	—	—	—	—	—	—	4
1920	—	—	—	—	—	—	—	—	—	—

Table 58.

Canal Boats Acts, 1877 & 1884.

Number of boats inspected during 1919	Nil.
Number of persons housed on board	
Number of males housed on board	
Number of females housed on board	
Average number of persons per boat	
Boats registered for five persons	
Number of cases of infectious diseases on board the boats ...	
Number of notices and letters sent	
Number of boats without certificate or registered number ...	
Number of boats with leakages and requiring painting	
Unregistered boats	

SCHOOL

HYGIENE.

PREFACE.

TO THE CHAIRMAN AND MEMBERS OF
THE EDUCATION COMMITTEE.

Ladies and Gentlemen,

I beg to submit the following report which deals with the work of medical inspection, following up and treatment of children attending the elementary and secondary schools in the borough, carried out during the year under the general direction of the school medical officer.

During 1920 systematic medical inspection was again begun. Six thousand six hundred and eighty children of the age specified by the Board of Education were medically inspected, and of these children 2,085 were referred for treatment, 1,457 were treated and 470 were referred for observation. There were also examined 3,182 special cases and 7,073 children previously found defective were re-examined.

A total of 6,886 defects were referred for treatment and of these 6,076 were treated. That 88 per cent of the defects were treated is a record of which the committee may reasonably be proud.

A dental inspection of 3,092 children was made by the school dentist and 6,361 children whose teeth were found defective at previous inspections were re-examined. Four thousand, four hundred and ninety-three children were referred for dental treatment and 2,720 treated at the school clinic.

Medical inspection has been carried out at the Cowley Hill (Secondary) School where 3 boys and 69 girls were examined and 118 defects found. There is in St. Helens no approved scheme for the extension of the School Medical Service to Higher Education. The need of such extension is urgent.

At the school clinic 6,708 children were treated, 29,553 attendances being made and 688 children received 6,032 treatments in schools by the nurses.

At the inspection clinic 2,229 children were seen by the medical officers, 5,591 attendances being made.

The scheme instituted in March, 1919, whereby every child in school is seen each day by a nurse, and children absent through sickness are visited at home has proved successful from the points of view of health and school attendance. A special report on this subject is given on page 84.

I have pleasure in acknowledging the cordial co-operation of the Secretary for Education. My thanks are due to Dr. Hauxwell, the deputy medical officer, for much of the work of preparing this report.

I am, Ladies and Gentlemen,
Your obedient servant,
JOSEPH CATES.

30*th March,* 1921.

At the beginning of 1920 there were in the borough under the control of the Education Committee 38 schools with 83 departments. Seven were provided schools and 31 non-provided. There was accommodation for 23,747 children, 20,214 being on the roll, with an average attendance of 18,162.

At the end of the year the number on the roll was 20,217 and the average attendance 18,167.

The number of children under five years of age attending school on the 31st March, 1920, was 700.

Co-ordination with Public Health Services.

Under the present scheme in St. Helens the town is divided into twenty districts each of which is in charge of a health visitor who deals with all maternity and child welfare work, visiting cases of tuberculosis and infectious diseases, inspecting midwives as well as having charge of one or more schools in her district and being responsible for the following up of children attending these schools. In this way the health visitor knows intimately the family, the family conditions and the home surroundings of the children. As part of her duty is the daily visiting of the schools in her district, the advising of parents respecting the health of their children, noting and visiting absentees she knows much about the school history of each child. At the medical inspection she knows which children require special attention and is in a position to give the medical officer important information as to family history, environment and the school life of the child. Co-ordination with infant and child welfare work is further insured by transferring the child's birth card to the school medical side of the department as soon as the child becomes of school age. In this way the birth card containing a history of the child up to the age of five years becomes of great assistance to the school medical service.

Medical Inspection.

Systematic medical inspection was started again in 1920 after an interval of four years during which it had been allowed to lapse owing to war conditions. Three visits by the medical officers are paid to each school during the year. At each visit one or more of the age groups of the Board of Education are examined together with any child previously examined and referred either for treatment or for observation and any other children whom either the nurse or teacher wish to bring before the medical officer.

Visits.

The following visits were made during the year to the various schools and departments :—

By assistant school medical officers	304
By nurses	19,594

Defects.

Table II shows the number of serious defects found amongst all children medically examined and either brought to the notice of the parents or referred for observation, and table VI shows the number amongst those of the Board's age groups together with those treated. During the year the register of exceptional children in the area has been revised and brought up to date. Table III sets out the numbers of these children so far as can at present be ascertained.

Cleanliness.

In addition to the examination at the time of the medical inspection by the medical officer practically every child attending school is examined for cleanliness three times a year by the school nurse. The number of children so examined together with the results of examination are shown in table IV.E. When the condition of the child is such as to require improvement a notice is sent to the parent drawing attention to the fact and suggesting the best means of remedy. The school nurse visits the home and endeavours to assist the mother. Should there be no improvement within a week a second notice is sent and further visits are paid by the nurse. Cases of persistent neglect are reported to the Local Authority and removed from school for compulsory cleansing. That only two cases had to be cleansed during the year out of 4,515 found unclean is satisfactory.

Dental Inspection.

During nine months of the year a whole time dentist was engaged in the work of dental inspection in the schools and treatment of defective children at the school clinic. From June to August owing to the resignation of the dentist no inspections were carried out, but on one half day per week a visiting dentist treated urgent cases at the clinic. Under the scheme two visits are paid to each school during the year and the six to eight age group of children examined together with those previously found defective. The remainder of the dentist's time is occupied at the clinic.

Table IV. D. 1. gives the number of children inspected and re-inspected, the number referred for treatment and the number treated by the school dentist during the year.

Table IV. D. 2. gives the details of the time taken and the operations performed.

Inspection Clinic.

An inspection clinic is held in the medical officer's department at the Town Hall on two mornings each week. Cases are referred to this clinic by school attendance officers, teachers and nurses for advice and report. By arrangement with the school attendance department all cases for exemption are specially reported on previous to the granting of exemption, and by arrangement with the juvenile employment bureau reports are furnished on all children leaving school who apply to the bureau for work. During the year 1920, 344 children for exemption, 50 bursars, and 74 children for juvenile employment were examined and reported on, making together with other cases referred by reason of a defect or for attendance purposes a total of 2,229 children with 5,591 attendances.

The following is a summary of the examinations of children with respect to their physical fitness to undertake employment :—

Number of children examined	344
Number passed as physically fit on first examination	283
Number with remedial defects who were passed after receiving treatment	55
Number rejected as unfit	6

CAUSE OF REJECTIONS.

Phthisis	1
Poor physique and tuberculosis of skin	1
Old Spinal Disease	1
Bad Adenoids (refusing treatment)	1
Seriously defective vision	1
Poor physique and mouth breather	1

Following Up.

The following up of children discovered at the time of inspection to be suffering from disease or defect is entirely carried out by nurses in the medical officer's department and the re-examination of the cases treated is performed by the assistant medical officers. The various duties usually performed by the health visitors and school nurses are so allocated that by placing each nurse in charge of a district a considerable amount of overlapping is avoided, and the saving of time thus effected allows a more comprehensive system of after-care to be adopted.

In addition to visiting the homes of children found defective at medical inspection the nurses visited 1,137 cases referred to them by the school attendance department and all children who were absent from school for more than three days. A total of 19,843 home visits by nurses was made during the year.

TREATMENT.

The treatment clinic is situated in Claughton Street. The diseases treated are those affecting the eyes, ears, nose and throat, and teeth; ringworm of the scalp by means of X-Rays and also minor ailments. The treatment of the children at the clinic is partly carried out by a rota of private practitioners appointed by the Local Authority. There is a whole time school dentist. Minor ailments, however, are treated by nurses acting under the directions of the school medical officer. The supervision of the medical, surgical and dental work of the clinic is in the hands of the school medical officer, who is directly responsible to the committee. The medical practitioners are part-time officers, each attending at the clinic for one half day per week. Treatment of small minor ailments has also been carried out by nurses in certain schools in the borough. In this way diseases and injuries have been treated in their early stages and attendance at the clinic involving sometimes a considerable journey and loss of attendance grant has been avoided. During the year 688 cases were dealt with by nurses in schools and 6,032 treatments carried out.

A fee not exceeding two shillings is recovered from parents found on enquiry to be able to pay for treatment. Children obviously necessitous are sent direct to the clinic so that there may be little delay.

During 1920 the Education Authority contributed £1,531/19/4 towards the maintenance of children at surgical homes and other institutions.

Table IV gives in detail the treatment obtained for the various defects whether at the school clinic or otherwise, and table V gives a summary of all treatment (excluding dental defects and uncleanliness). Table D.2. shows the nature and extent of the dental treatment.

SCHOOL CANTEENS.

Necessitous children requiring free meals are reported to the district care committees by head teachers and others. Inquiries are then made concerning the circumstances of the parents. If the children cannot be properly fed by the parents owing to unfavourable home conditions, they are supplied with meals at the School Feeding Centres.

Breakfasts and dinners are provided at six centres, namely, Windle Pilkington, Merton Bank, Robins Lane, Thatto Health, Sutton Manor and Marshalls Cross Schools. Dinners only are provided at three centres, viz. :—Higher Grade, St. Peter's, and Parr Flat Schools. The meals are prepared at the centres and are served by paid attendants. At Sutton Manor Centre the meals are cooked at a private house free of charge. At Marshalls Cross Centre the meals are prepared and served by the teachers.

The total number of meals served during the year was 160,634; 114,425 being provided free.

The average total cost per meal is 3·59 pence ; while the average cost per meal for food only is 2·58 pence.

The clerical work arising out of medical inspection is very heavy. During 1920, 3,677 exclusion notices, 531 final notices, 2,996 dental notices, 1,715 miscellaneous notices and several thousands of letters were sent out from the medical officer's department.

TEACHING OF HYGIENE AND PHYSICAL EXERCISES.

No general scheme for the teaching of hygiene and temperance has been adopted in the borough. In some of the schools, however, the work is performed by individual teachers. Physical and breathing exercises are carried out in each school. No arrangements have yet been made for open-air schools, school camps or similar institutions. There is urgent need of special accommodation for children mentally and physically defective.

REPORT ON THE WORKING DURING TWO YEARS OF THE SCHEME OF DAILY SURVEY OF CHILDREN AND FOLLOWING UP OF ABSENTEES BY HEALTH VISITORS.

On March 17th, 1919, on the advice of the medical officer of health arrangements were made for nurses to visit daily each class in every school. The primary object being the detection of the beginnings of disease, and the provision of advice and early treatment. The borough was divided up into twenty areas, each containing one or more schools with a total population of about a thousand children of school age.

The general routine in practice is as follows, and it is only under exceptional circumstances that a deviation from this scheme is permitted.

During the morning session the nurse enters each class, examines the attendance register, and fills in a card for every child absent for more than two days. The class is then rapidly surveyed, and a careful examination is made of any child that appears to be ailing, or concerning whose condition the class teacher is anxious, and particularly those coming from homes in which infectious disease exists. During the visit the nurse confers with the head teacher respecting any action arising out of the inspection.

The cards relating to absentees are distributed among the nurses in whose districts the children live, a home visit is made, usually within twenty-four hours, and a report is entered on the card which is returned to the nurse who in the first place made it out. The class teacher is thus able to obtain within a reasonable period an authorative report by a trained nurse who has seen, and in most cases examined the absentee.

Some indication of the work entailed can be gathered from a return obtained from ten representative schools in the borough. The figures relate to the whole of the year 1920. At these schools there are 6,339 children in attendance. During the year the nurses visited 4,384 absentees from these schools. Of these, 1,855 were returned to school at once. One thousand six hundred and forty-nine were allowed to remain at home for short periods on account of illness. Six hundred and nineteen were excluded by the school medical officer on account of various ailments. With regard to 261 children no records were available. The health visitors made 1,492 after visits to follow up the children who were allowed to remain at home, or were excluded.

Immediately the scheme was put into operation there was a well marked improvement in the general appearance and cleanliness of the children, and parents at once began to ask the nurses for advice regarding minor ailments and other conditions.

In certain of the schools remote from the clinic it soon became necessary to provide for the treatment of cuts, sores, discharging ears and other minor ailments by the nurses on school premises, with the result that children who would otherwise have been kept at home untreated, were sent to school.

During the past year minor ailments have from time to time been treated in 15 of the schools most distant from the clinic. Six thousand

and thirty-two treatments have been given in these schools to 688 minor ailments, and each of these treatments can be regarded as an attendance gained.

This system of daily nursing supervision seemed to be sufficiently comprehensive to allow for the regular attendance in school of all children coming from homes in which there was infectious disease, and as an experiment the exclusion of " contacts " was discontinued.

Although infectious disease has not been prevalent in the borough during the past year, 545 contacts with cases of scarlet fever have been allowed in school, and 5,450 attendances thereby gained. One hundred and fifty-four contacts with diphtheria by being in school have made 1,540 attendances. Two hundred and eighty whooping cough contacts have made 8,400 attendances, and 3,557 contacts with measles have gained 106,710 attendances which would have been lost under the system previously in force ; that is, there have been 122,100 attendances earned by the presence in school of these contacts under the daily supervision of trained nurses.

During the two years that the scheme has been established there has been evidence of success. Teachers appreciate the daily presence in school of nurses to whom reference can be made as occasion demands. The children come to know that the nurse will visit each class, and often themselves volunteer information concerning their health and home circumstances.

The experience of St. Helens in the working of the scheme has proved that it is reasonably safe to allow in school children who have been in contact at home with infectious disease, *providing there is the daily visiting of each school by a trained nurse, but without such supervision it would be dangerous to expose a healthy child to the risk of acquiring infectious disease from the presence of a contact in school*, and speaking generally, parents would be the first to object, and rightly, to the risk entailed.

On several occasions during the last two years unsuspected cases of diphtheria have been discovered in school by the swabbing of the throats of children in attendance, and during the last outbreak of measles nurses almost daily detected in class children who were beginning to show the early signs of the disease. It can be reasonably claimed that the daily visiting of the schools has :—

1. Reduced the prevalence of infectious diseases.
2. Led to the early discovery of various minor ailments and thereby reduced the amount of suffering and injury to health.
3. Increased the percentage of successful treatment of cases of disease or defect discoverd during systematic medical inspection.
4. Brought about a marked improvement in the cleanliness and general appearance of the children.

The system whereby there is appointed for a small area one trained nurse who there carries out all duties properly to be performed by a woman was first suggested about fifteen years ago, and after being given a trial in several localities has become the system generally recognised as the most economical and efficient.

This district system of health visiting enables one trained nurse to advise, help and safeguard the health of the expectant mother, the infant and the children from infancy to the end of school age, and it largely prevents that reasonable complaint of mothers that several officials are calling at the same house in matters relating to health and education.

There are comparatively few progressive areas where an attempt is not now made to co-ordinate the duties of the public health and school medical services.

The twenty district health visitors in St. Helens perform the following duties :—

1. Assist medical officers at the medical inspection of school children. Two hundred and sixty-seven school inspections were made in 1920, and 9,563 children were systematically examined.
2. Examine all children in school with respect to cleanliness—33,844 children were examined in 1920, and 4,515 notices were issued for verminous conditions.
3. Daily survey children in school, treat minor ailments in school in outlying districts—6,032 treatments were carried out in 1920.

4. Follow up at home defects discovered at medical inspection and absentees on alleged medical ground--5,248 defects were found and visited during 1920.
5. Assist the medical officers at the re-examination of defects previously discovered—7,073 re-examinations were made in 1920.
6. Assist at the inspection clinic—5,591 attendances were made by children in 1920.
7. Investigate and report upon all notifications of infectious diseases, and re-visit until the home is free from infection—there were 4,291 notifications during 1920.
8. Investigate, report upon and re-visit all cases of pulmonary tuberculosis and non-pulmonary tuberculosis—there were 1,251 cases on the books at the end of 1920.
9. Investigate and report upon contacts with certain diseases such as small pox.
10. Visit and advise expectant mothers—1,435 visits were made last year.
11. Visit and advise and re-visit mothers subsequent to birth—32,233 visits were made on this account during 1920.
12. Visit and investigate all cases where midwives have required the services of a private practitioner—1,258 medical aid notes were sent in during 1920.
13. Visit, investigate and report upon all applications for assistance such as milk for children, food or medical services. 325 applications were made during the last three months of 1920.
14. Attend the maternity and infant welfare centres. One thousand one hundred and seven attendances were made by expectant mothers, 23,292 by mothers, and 23,625 by children during 1920. There are two centres open each afternoon except Saturday.
15. Continually supervise the home surroundings of illegitimate and adopted children.
16. Visit children up to school age.

The three or four nurses at the school clinic—

1. Treat minor ailments every day from 9 to 5 (on Saturday till 12-30).

   No less than 1,952 children were treated for minor ailments during 1920.

2. Assist the private practitioners at operations at the clinic.
3. Assist the medical officers at the tuberculosis dispensary—three sittings a week.
4. Assist the medical officers at the venereal disease centres for women, once weekly.
5. Assist the school dentist daily—this occupies the whole time of one nurse.
6. Visit and nurse certain cases of illness such as ophthalmia in the homes.

STANDARD OF NUMBERS OF STAFF.

The standard of staff adopted by the Ministry of Health is as follows :

1 whole time nurse for every 400 births—3,300 births ...	8 nurses.
1 whole time nurse for every 2,000—3,000 school children—20,000 school children	8 nurses.
	16 nurses.

Beyond this three whole time nurses are necessary for tuberculosis and three for infectious diseases (except in times of epidemics).

A considerable amount of sanitary work which was performed in the department in 1914 by men is now carried out by nurses and as a consequence there are now only seven men employed as sanitary inspectors, assistant inspectors and disinfectors as compared with eleven in 1914.

Therefore, when it is realised that in St. Helens there is carried on in addition a daily survey of all school children it will be clear that the present staff is barely sufficient for the needs of the district and the work requiring to be done.

HEALTH VISITING AND SCHOOL ATTENDANCE.

The present controversy with regard to value of the daily visiting of schools ranges round a statement made in the report of the medical officer of St. Helens for the year 1919 that the most striking feature of the experiment has been the persistent improvement in the average percentage attendance, an improvement which earned during 1919 for the local authority about £1,800 in increased grant.

In order to appreciate the true significance of the increase in attendance it is necessary to refer to the following table which gives figures for the years 1900 to 1920.

1900	82.4	1911	90.4
1901	83.8	1912	90.7
1902	82.7	1913	89.3
1903	84.7	1914	89.3
1904	86.4	1915	87.5
1905	91.5	1916	87.9
1906	92.9	1917	85.8
1907	91.9	1918	84.9
1908	92.1	1919	89.8
1909	90.1	1920	89.8
1910	91.0		

It will be noted that :—

1. There was a period of low average attendance 1900—1904 which certainly could not be attributed to the activities of the school medical service.

2. That the attendance rose rapidly in 1905 and remained at about 90 per cent until 1914.

3. There has been a persistent fall in attendance since 1914 culminating in the low figure of 84.9 in 1918.

4. There has been a marked increase during the past two years.

It would be interesting to know whether any important change occurred in the personnel of the school attendance department in the years 1904 and 1915.

To observe the effect on the school attendance of the daily survey of the children in school reference must be made to the monthly average attendance figures before and after the beginning of the scheme of visiting in March, 1919.

1918—	June	86.0
	July	87.5
	July (two weeks)	75.0
	September	90.0
	October	90.0
	November (2 weeks)	87.3
	December (2 weeks)	86.5
1919—	January (schools closed)	
	February	86.7
	MARCH	82.0
	April	89.8
	May	91.1
	June	91.7
	July	91.3
	September	91.8
	October	91.6
	November	88.3

It will be seen that a rapid increase in attendance took place in the returns for April, 1919—as soon as the daily visiting of schools by nurses began and that the increase was maintained for the following month, and as a matter of fact has averaged nearly 90 (the exact figure being 89.8) for each year since.

It is difficult to follow the argument that this sudden and sustained increase is due to the cessation of the war and it is certainly not due to presence in school of contacts who were previously excluded because the number of contacts during the whole period March, 1919—December, 1920, were comparatively speaking, few, and at present do not amount to more than 300 to 400.

The chief reasons for the improved attendance seemed to be :—

1. Children know that a nurse will be in school each day and they therefore do not stay away for trivial ailments.

2. Parents know that absentees are promptly followed up by the nurses and that the children are not forced back to school if there are reasonable medical grounds for their absence, that is to say, the nurse comes to the home not as a truant officer but as a friend. Therefore, parents send children to school for the opinion of the nurse whereas formerly they would have kept the children at home.

When the scheme of daily visiting was begun it was not anticipated that the health visitors would soon possess first hand knowledge of the causes of absence of children from school, and in fact be in a better position owing to their training as nurses to enquire into reasons for absence and to decide on the merits of each case.

The Chief Medical Officer to the Ministry of Health in his report for 1918 states:—"Much work connected with the visiting of children absent on account of actual or alleged sickness which formerly, in the absence of any other more suitable official, was carried out by a school attendance officer, can now, in some areas at least, be undertaken by a school nurse. It should be the business of the school medical officer to take steps by his health visiting staff to ensure that he has knowledge of and supervision over all children of school age not in attendance at school whether for longer or shorter periods. It is this consideration which lends special weight to the argument advanced in favour of the various activities connected with health visiting being so far as practicable in a given area combined in one person working intensively over a comparatively small area. In proportion as this desirable end is attained the work connected with visiting in the interests of school attendance should so far as the attendance officer is concerned be reduced to small proportions" . . . . .

In several localities, Pembroke, Tiverton, Bradford, Leicester, Ealing and Scarborough it has now been decided largely to replace school attendance officers by trained nurses and there is no reason to think that except from some of the officers affected there will be much opposition to the change which is undoubtedly in the interest of health, efficiency and economy. So far as St. Helens is concerned the work of the school attendance department might be materially reduced if school attendance officers would refrain from visiting the children that the nurses are satisfied are really ill. In other words if the attendance officers confine their attention to the following up of truants.

It will be agreed that someone must visit children who are absent from school on alleged medical grounds.

As the school medical officer must have a knowledge of and supervision over these absentee children it would appear reasonable that the visiting should be performed by a trained nurse who in the ordinary course of her duties will be visiting the particular district and probably the same house for other health purposes.

Table I.

Number of children inspected 1st January, 1920, to 31st December, 1920.

A—ROUTINE MEDICAL INSPECTION.

AGE.	ENTRANTS.					
	3	4	5	6	Other Ages.	Total.
Boys	30	296	509	43	43	921
Girls..........	22	290	516	55	58	941
Totals	52	586	1025	98	101	1862

AGE.	INTERMEDIATE GROUP.			LEAVERS.					
	7	8	Total.	12	13	14	Other Ages.	Total.	Grand Total.
Boys	605	409	1014	885	551	18	—	1454	3389
Girls	519	385	904	841	592	13	—	1446	3291
Totals	1124	794	1918	1726	1143	31	—	2900	6680

B—SPECIAL INSPECTIONS.

	Special Cases.	Re-Examinations
Boys	1672	3833
Girls	1510	3240
Totals	3182	7073

C—Total number of individual children inspected by the medical officer, whether as routine or special cases (no child being counted more than once during the year.)

Estimated number of individual children inspected—9,563.

Table II.

Return of defects found in the course of Medical Inspection in 1920.

Disease or Defect. (1)		Routine Inspections.		Specials.	
		Number referred for treatment. (2)	Number to be kept under observation, but not referred for treatment. (3)	Number referred for treatment. (4)	Number to be kept under observation, but not referred for treatment. (5)
Malnutrition		64	38	433	20
Uncleanliness—Head		382	2	..	..
Uncleanliness—Body		155	..	..	..
Skin	Ringworm—Head	3	..	57	..
	Ringworm—Body	2	..	105	..
	Scabies	2	1	79	4
	Impetigo	9	..	35	2
	Other Diseases (Non T.B.)	12	3	79	7
Eye	Blepharitis	25	13	26	5
	Conjunctivitis	2	1	25	1
	Keratitis	..	..	..	..
	Corneal Ulcer	4	..	10	..
	Corneal Opacities	9	10	5	7
	Defective Vision	443	94	143	61
	Squint	66	26	74	9
	Other Conditions	38	11	410	18
Ear	Defective Hearing	23	8	8	6
	Otitis Media	68	6	68	6
	Other Ear Diseases	2	1	8	1
Nose and Throat	Enlarged Tonsils	156	16	17	13
	Adenoids	65	5	72	10
	Enlarged Tonsils and Adenoids	76	2	21	1
	Other Conditions	358	4	31	15
Enlarged Cervical Glands—(Non-Tubercular)		3	1	49	7
Defective Speech		..	5	2	7
Teeth	Dental Diseases	507	..	13	2
Heart & Circulation	Heart Disease—Organic	3	32	14	9
	Heart Disease—Functional	..	31	2	5
	Anæmia	73	32	154	16
Lungs	Bronchitis	16	24	108	6
	Other Non. Tub. Diseases	..	5	89	4
Tuberculosis	Pulmonary—Definite	..	17	17	4
	Pulmonary—Suspected	4	29	29	11
	Non-Pulm.—Glands	8	25	10	5
	Non-Pulm.—Spine	..	..	2	4
	Non-Pulm.—Hip	..	4	4	5
	Non-Pulm.—Other Bones and Joints	..	4	3	3
	Non-Pulm.—Skin	..	2	3	3
	Non-Pulm.—Other Forms	..	1	1	7
Nervous System	Epilepsy	..	2	1	7
	Chorea	..	3	16	4
	Other Conditions	..	19	27	10
Deformities	Rickets	2	11	9	11
	Spinal Curvature	..	4	..	2
	Other Forms	3	8	12	24
Other Defects and Diseases		8	40	194	71
Number of individual children having defects which required treatment or to be kept under observation		5248			

Table III.

Numerical return of all exceptional children in the area in 1920.

			Boys	Girls	Total
BLIND. (including partially blind).		Attending Public Elementary Schools ...	6	9	15
		Attending certified schools for the blind..	1	5	6
		Not at school	—	1	1
DEAF AND DUMB. (including partially deaf).		Attending Public Elementary Schools...	2	4	6
		Attending certified schools for the deaf	3	5	8
		Not at school	1	—	1
MENTALLY DEFICIENT.	Feeble Minded.	Attending Public Elementary Schools...	26	25	51
		Attending certified schools for mentally defective children	—	—	—
		Notified to the Local Control Authority during the year	—	—	—
		Not at school	2	1	3
	IMBECILES	At school	—	—	—
		Notified to Local Control Authority	—	—	—
		Not at school	5	4	9
	IDIOTS.		—	—	—
EPILEPTICS.		Attending Public Elementary Schools...	2	5	7
		Attending certified schools for Epileptics..	—	1	1
		In Institutions other than certified schools	1	—	1
		Not at School	—	—	—
PHYSICALLY DEFECTIVE.	Pulmonary Tuberculosis	Attending Public Elementary Schools. ..	33	62	95
		Attending certified schools for Physically Defective Children	—	—	—
		In Institutions other than certified schools	—	—	—
		Not at school	2	2	4
	Other forms of Tuberculosis	Attending Public Elementary schools....	52	47	99
		Attending certified schools for Physically Defective children	—	—	—
		In Institutions other than certified schools	—	—	—
		Not at school	7	6	13
	Crippling due to Tuberculosis (Bones & Joints)	Attending Public Elementary Schools ...	24	21	45
		Attending Certified schools for Physically Defective children	1	5	6
		In Institutions other than certified schools	—	—	—
		Not at school	10	11	21
	Crippling due to causes other than Tuberculosis	Attending Public Elementary Schools ..	72	62	134
		Attending certified schools for physically defective children	2	—	2
		In Institutions other than certified schools	—	—	—
		Not at school........................	9	5	14
	Other physical defectives, *e.g.* delicate and other children suitable for open-air schools. (Children suffering from severe heart disease).	Attending Public Elementary Schools ...	217	262	479
		Attending Open-air Schools	—	—	—
		Attending Certified Schools for Physically Defective Children other than Open-air Schools	—	—	—
		Not at School	—	—	—
DULL AND BACKWARD		Retarded 2 years	95	54	149
		Retarded 3 years	17	16	33

Table IV A.

Treatment of defects of children during 1920. These tables are to include all children treated during 1920.

Minor ailments.

	Treated.			
	Referred for Treatment.	Clinic, school nurse, &c.	Otherwise.	Total.
Skin——Ringworm, head.......	62	58	4	62
body	259	245	14	259
Scabies	194	177	17	194
Impetigo..............	854	801	53	854
Minor injuries	474	367	79	446
Other Skin disease	190	178	11	189
Ear disease....................	339	358	51	409
Eye disease—External and other	863	663	156	819
Miscellaneous	379	326	43	369
	3614	3173	428	3601

Table IV B.

Visual Defects.

Number of Children								
Referred for Refraction.	Submitted to Refraction.				For whom glasses prescribed.	For whom provided.	Recommended other treatment.	Received other forms of treatment.
	At Clinic.	Own Dr. or Hospital.	Otherwise.	Total.				
983	739	91	23	853	796	766	38	19

Number where no treatment was necessary—19.

Table IV C.

Nose and Throat.

Referred for Treatment.	Number of Children.			Received other forms of treatment.
	Received operative treatment.			
	Clinic. *	Own Dr. or Hospital.	Total.	
996	268	107	357	243

*Means under Local Authority's Scheme.

Table IV D.

Treatment of Dental defects.
1—Number of children dealt with.

	Age Groups.										Total Routine	Special	Total
	5	6	7	8	9	10	11	12	13	14			
spected by Dentist ..	446	895	548	757	..	..	..	..	..	..	2646	446	3092
eferred for Treatment	..	..	..	..	..	..	..	..	..	..	1051	446	1497
e-examined by Dentist	..	..	..	107	1686	1771	1689	1108	..	..	..	..	6361
eferred for treatment..	..	..	..	..	..	..	..	..	..	..	..	..	2996
otal referred for treatment	..	..	..	..	..	..	..	..	..	..	..	..	4493
ctually treated	..	..	..	..	..	..	..	..	..	..	..	..	2720
e-treated*	..	..	..	..	..	..	..	..	..	..	..	..	1436

* It is understood that cases under this head are also included under (d) above.

2.—Particulars of time given and of operations undertaken.

No. of half days devoted to inspection.	No. of half days devoted to treatment.	Total number of attendances made by the children at the Clinic.	No. of permanent Teeth.		No. of temporary Teeth.		Total number of fillings.	No. of administrations of general anæsthetics included in 4 & 6.	No. of other operations.	
			Extracted.	Filled.	Extracted.	Filled.			Permanent Teeth.	Temporary Teeth.
1	2	3	4	5	6	7	8	9	10	11
86	171	3186	772	486	2826	416	902	91	419	240

Table IV E.

(a.)	Average number of visits per annum made by school nurses to each school	Daily.
(b.)	The total number of examinations made of children by school nurses in the year in the schools	33,844
(c.)	The number of individual children found unclean	4,515
(d.)	The number of children cleansed by the local authority..............	.. 2
(e.)	The number of legal proceedings taken	0

Table IV F.

All other defects other than those in Tables A, B, C.

	Number referred for treatm't.	Number treated.	Result of Treatment.			
			Rem.	Imp.	Stat.	Retro.
Malnutrition	503	415	229	178	8	..
Enlarged Cervical Glands	57	32	29	3	..	..
Defective Speech	4	3	..	2	1	..
HEART—Organic	21	13	..	9	4	..
Functional	8	8	..	4	4	..
Anæmia	247	196	129	56	11	..
LUNGS—Bronchitis	131	110	24	76	10	..
Other Non.-T. B. Lungs	91	78	31	39	8	..
T. B.— Phthisis	48	40	..	24	15	1
Suspected Phthisis	17	11	..	9	2	..
Glands	28	22	2	13	7	..
Spine	9	9	..	4	5	..
Hip	7	6	..	3	3	..
Other Bones and Joints	8	8	..	6	2	..
Skin	6	5	..	3	2	..
Other T. B.	10	9	..	7	2	..
NERVOUS—Epilepsy	8	8	..	3	5	..
Chorea	16	16	7	7	2	..
Other Conditions	30	16	12	4	..	..
DEFORMITIES—						
Rickets	21	17	1	10	6	..
Spinal Curvature	2	2	..	1	1	..
Other Forms	21	18	1	6	10	1
TOTALS ..	1,293	1,042	465	467	108	2

Table V.

Summary of treatment of defects.

(As shown in table VI but excluding dental defects).

DISEASE OR DEFECT.	NUMBER OF CHILDREN			
	Referred for treatment.	TREATED		
		Under local Education Authorities Scheme.	Otherwise.	Total.
Minor Ailments	3614	3173	428	3601
Visual Defects	983	701	114	815
Defects of Throat and Nose	996	268	350	618
Other Defects	1293	560	482	1042
Total	6886	4702	1374	6076

Table VI.

Summary relating to children medically inspected at the routine inspections during the year 1920.

(1) The total number of children medically inspected at the routine inspections	6680
(2) The number of children in (1) suffering from :—	
Malnutrition	472
Skin Disease	139
Defective Vision (including squint)	1293
Eye Disease	134
Defective Hearing	45
Ear Disease	109
Nose and Throat Disease	1860
Enlarged Cervical Glands (non-tubercular)	2005
Defective Speech	34
Dental Disease	1124
Heart Disease—	
Organic	37
Functional	42
Anæmia	333
Lung Disease (Non-tubercular)	193
Tuberculosis—	
Pulmonary—definite	17
suspected	34
Non-pulmonary	44
Diseases of the Nervous System	29
Deformities	28
Other Defects and Diseases	66
(3) The number of children in (1) suffering from defects (other than uncleanliness or defective clothing or footgear) who require to be kept under observation (but not referred for treatment)	470
(4) The number of children in (1) who were referred for treatment (excluding uncleanliness, defective clothing, &c.	2085
(5) The number of children in (4) who received treatment for one or more defects (excluding uncleanliness, defective clothing, &c.)	1457